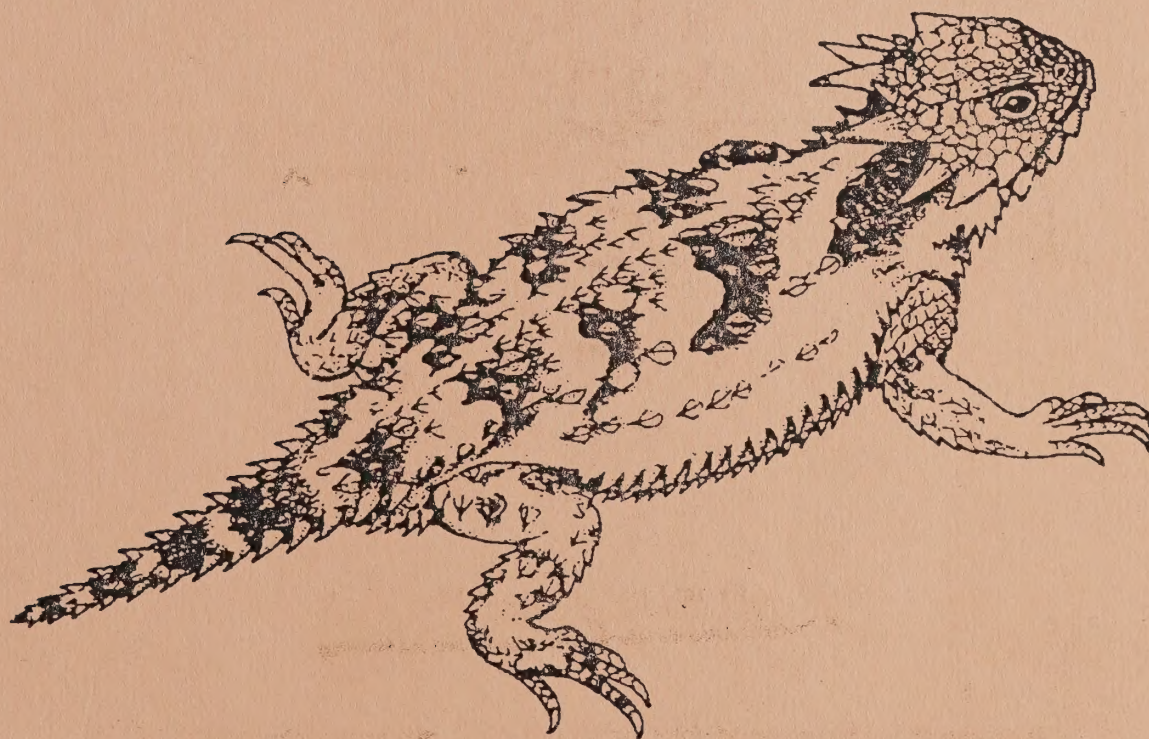


CITY OF COALINGA



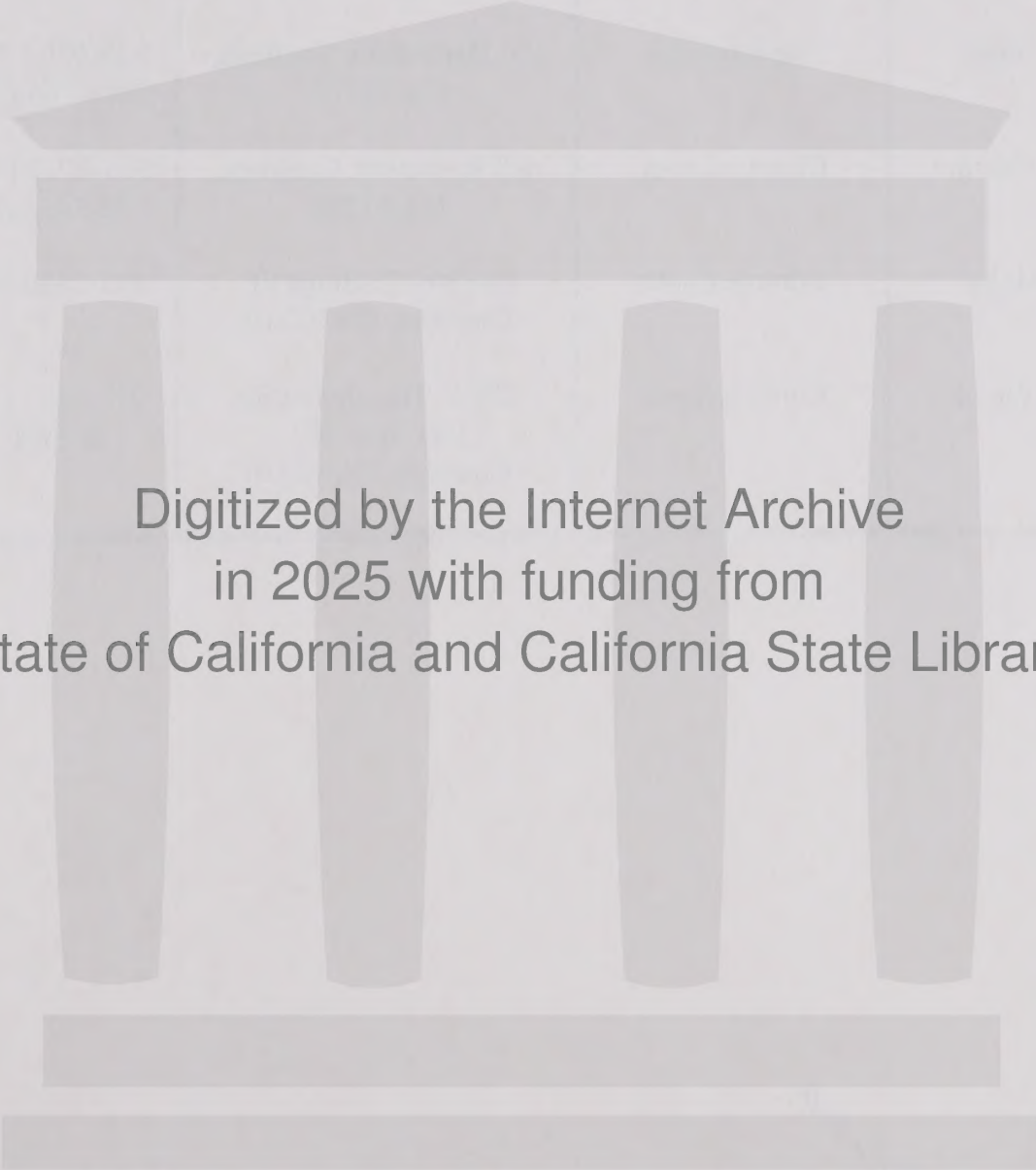
GENERAL PLAN

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CITY OF COALINGA
GENERAL PLAN 2015

CITY OF COALINGA



1994 GENERAL PLAN

The horned toad has been the symbol of the City of Coalinga since city founders began wagering on lizard races in the first Horned Toad Festival in 1933.

Today, the horned toad symbol has a new role as Coalinga plans its future within the context of managed growth. Assuring the enhancement of the community's high quality of life through careful development planning and habitat conservation is the cornerstone of Coalinga's planning efforts.

CITY OF COALINGA GENERAL PLAN 2015

Recommended By:

COALINGA PLANNING COMMISSION

October 25, 1994
Resolution No. 94P-419

Donna Pressey, Chairwoman

Don Forth
Bruce Linsten

Tom Terranova
Rycharde Gambin

Approved By:

CITY COUNCIL

December 1, 1994
Resolution No. 2470

Alfonso Bonilla, Mayor

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- Air Quality Element
- Airport Land Use Plan
- Housing Element
- Habitat Conservation Plan Summary

Part III: Planning Context

Appendix:

- A. Environmental Impact Report Reference Document*
- B. 1994 Traffic Report*
- C. Noise Evaluation*
- D. General Plan Glossary*

The Coalinga General Plan format is designed for ease of use and understanding, as well as to insure that the legal requirements of state planning law are met. This Plan was adopted in 1994 and designed for a 20-year period -- to the Coalinga of 2015.

A series of maps and graphics comprise much of the first section of the Plan. These maps illustrate important policies regulating the future use of property, as well as factors to be considered during the evaluation of property under the City's jurisdiction. The map section begins with illustrations showing the distribution of uses of property envisioned for the year 2015. These maps are followed by illustrations showing streets, trails and bicycle paths, areas subject to flooding, major utility lines, mineral resources, public facilities such as fire stations, schools, agricultural areas, and noise impacts from roads and from the airport.

The Plan consists of two major parts - **Part I: Coalinga Plan 2015** and **Part II: Special Plan Documents**. Together these are the Coalinga General Plan. A third part, **Part III: Planning Context** is a supporting document which provides background information for Parts I and II.

Parts I, II and III address the requirements of the California Environmental Quality Act and, with an accompanying document called the Environmental Impact Report Reference Document, serve as the General Plan's Environmental Impact Report (EIR). The General Plan is incorporated as part of its own EIR.

Part I: Coalinga Plan 2015 is designed for day-to-day use by the public, city staff, ad hoc committees, commissions, and especially by the Planning Commission and City Council.

Topics addressed in Part I are:

- Coalinga: Past, Present and Future;
- The Setting;
- The Planning Areas;
- Plan Principles;
- Use of the Plan;
- Plan Preparation;
- Organization of the General Plan;
- Amendment of the Plan;
- Related Plans and Programs;
- Goals and Policies; and
- Land Use Classifications.

Also included in Part I are:

- Exhibits showing the various geographic and jurisdictional areas covered by the Plan;
- Maps, as previously described, illustrating the City's policy guiding the use of land and factors which have an effect on land use policy such as flooding and gravel mining; and
- Standards and guidelines pertaining to streets, trails, bikeways, and noise factors.

Part II: Special Plan Documents contains several reports and elements, though an integral part of the General Plan, are separated from Part I and serve as free-standing documents. Documents included are:

- The "Airport Land Use Plan" pertaining to the use and operation of the Coalinga Airport;
- The "Air Quality Element" which is designed to help the City meet state and federal air quality requirements by following the content and format of the San Joaquin Valley Unified Air Pollution Control District's "Model Air Quality Element;"
- The Housing Element, which because of state legal requirements must contain specific information in a format acceptable to the State Department of Housing and Community Development; and
- The Habitat Conservation Plan (HCP) Summary Report which summarizes key information pertaining to the HCP's methods and policy for the preservation of rare and endangered plant and animal species.

Part III: Planning Context is designed to accompany Parts I and II by providing background information and supporting documentation on current conditions and plan implications. This part of the Plan is designed for reference use. Because this information becomes quickly dated, Part III can be updated administratively, i.e., without requiring a formal General Plan Amendment. The primary sections of Part III are:

- Land Use (how property is used in Coalinga and how much growth is likely to occur in various portions of the geographic areas addressed by the Plan);

PREFACE

- Public Services (fire and police service, and schools);
- Infrastructure (streets and utilities);
- Resource Conservation (plants and animals, water conservation, mineral resources, solid waste management, and cultural resources);
- Recreation and Open Space (parks, trails, and recreation); and
- Public Safety (noise, flooding, earthquake hazards and geology, fire safety, and hazardous materials).

The Coalinga General Plan has one overriding purpose:

To manage growth while assuring the enhancement of the community's high quality of life through careful development planning and habitat conservation.

COALINGA: PAST, PRESENT AND FUTURE

The Beginning

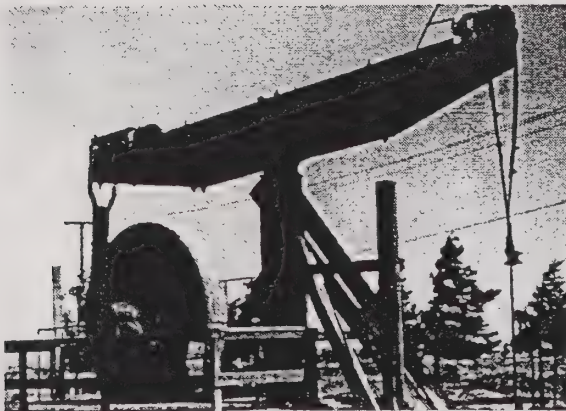
Since its establishment in 1887 as "Coaling Station A" by the Southern Pacific Railroad, Coalinga has been a special place, an embodiment of the positive aspects of a small town.

In addition to coal, mercury, asbestos, oil and aggregate deposits, local physical conditions of the area included the lack of potable water sources. For 70 years, residents had three faucets in every kitchen (hot, cold, and drinking water). But with great determination, they supported the Central California Water Project until the waters of the San Luis Canal reached Coalinga.

Incorporated in 1906, the city pursued a quiet rural lifestyle, based upon the economic assets of the Pleasant Valley environment such as oil, agriculture and trade. These assets remain although their relative importance has shifted as oil operations have decreased.

The Big Shake

On May 2, 1983, Coalinga's peaceful existence experienced a rude shake. A previously unknown fault produced a 6.7 earthquake that nearly leveled the entire downtown. Fortunately, no one was killed, but structural damage was severe. Rebuilding required millions of dollars.



COALINGA: PAST, PRESENT AND FUTURE

The people of Coalinga responded with resilience and confidence in their community, successfully recovering from this setback.

Coalinga Today

Today Coalinga reflects this strong sense of civic pride and perseverance. Over the past decade, the City initiated an aggressive and comprehensive economic development/environmental planning program. This program is designed to maintain and to enhance the community's quality of life while pursuing a sound economic base for the future.

Goals for the Future

The General Plan for Coalinga has three major goals:

Goal 1: Preservation of town character

Goal 2: Diversification of the economic base

Goal 3: Provision of quality public services

These goals are further defined, and specific policies which accompany them listed, in the Goals and Policies Section.

COALINGA: PAST, PRESENT AND FUTURE

The challenge for the coming years is to ensure that what makes Coalinga a desirable community today is nourished and improved as the City grows.

Managing change to accomplish the City's major goals is Coalinga's challenge.

THE SETTING

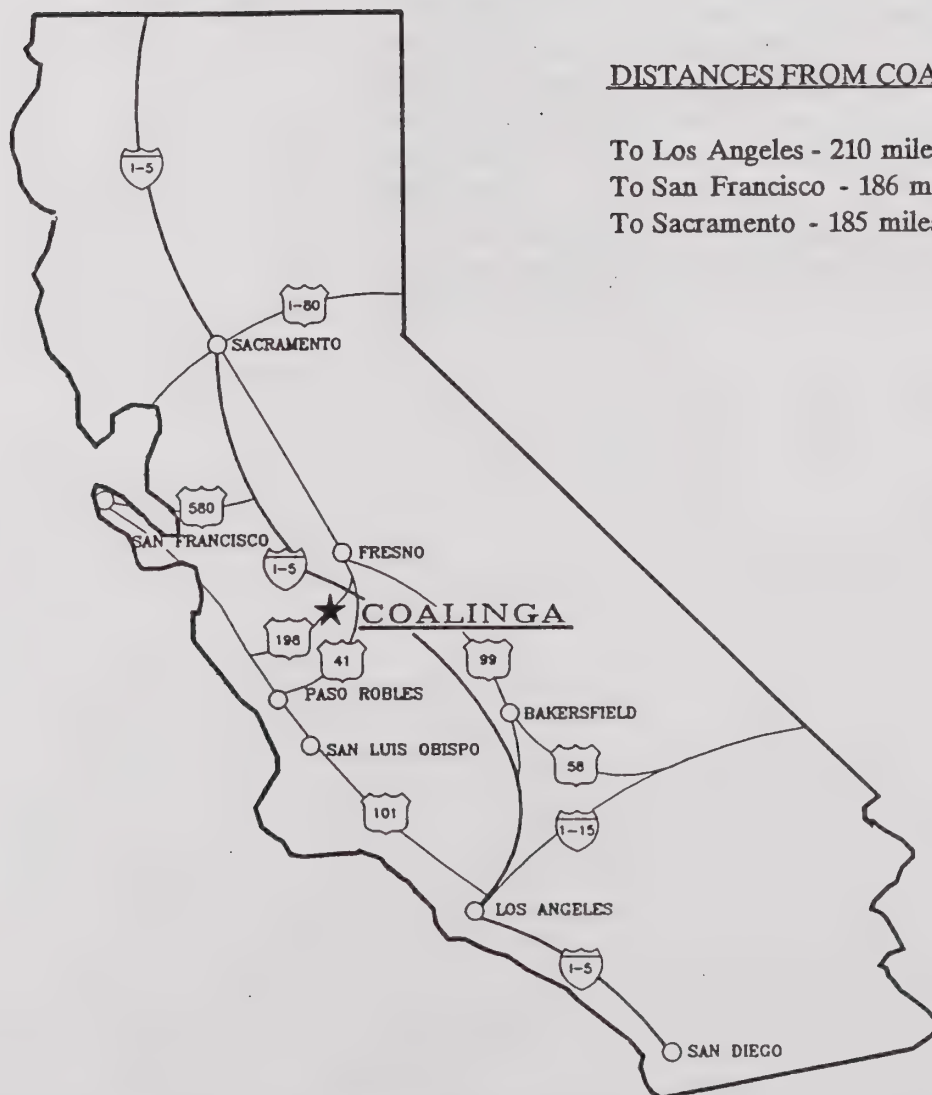
*Between
mountains and
ocean*

Located midway between San Francisco and Los Angeles near Interstate 5, Coalinga is near the center of this key transportation corridor.

*Between
Los Angeles and
San Francisco*

Coalinga lies close enough to the I-5 corridor to provide residences and services for employees of roadside businesses, without the negative aspects of being adjacent this busy commercial route.

The City is a regional agricultural, oil and government service center and is less than a two-hour drive from the high Sierras and the Pacific Ocean.



DISTANCES FROM COALINGA:

To Los Angeles - 210 miles
To San Francisco - 186 miles
To Sacramento - 185 miles

THE ROLE OF THE GENERAL PLAN

A framework for development

The General Plan is a broad foundation and a framework for planning the future of Coalinga. It is the official policy statement of the City Council and has important legal standing.

All other plans, programs, and codes must be consistent with the General Plan

As a statement of overall City policy, the General Plan is at the top of the hierarchy of all City plans, programs, codes and standards. These must, by state law, be consistent with the General Plan. They include the Development Code, (i.e., the City's Zoning, Subdivision, and associated ordinances), as well as review of individual project proposals.

A 20-year timeframe

This General Plan looks at the 20-year period from 1994 to 2015. The Plan is designed to guide development over this period; however, it is not a static document. Changes to the Plan are permitted and anticipated as circumstances change locally, regionally and nationally. The Plan is structured to allow for yearly updating of factual data. The flexibility of the General Plan results in a dynamic and practical tool for shaping the City according to the overall goals and policies of the Plan.

THE PLANNING AREAS

The geographic areas covered by the General Plan

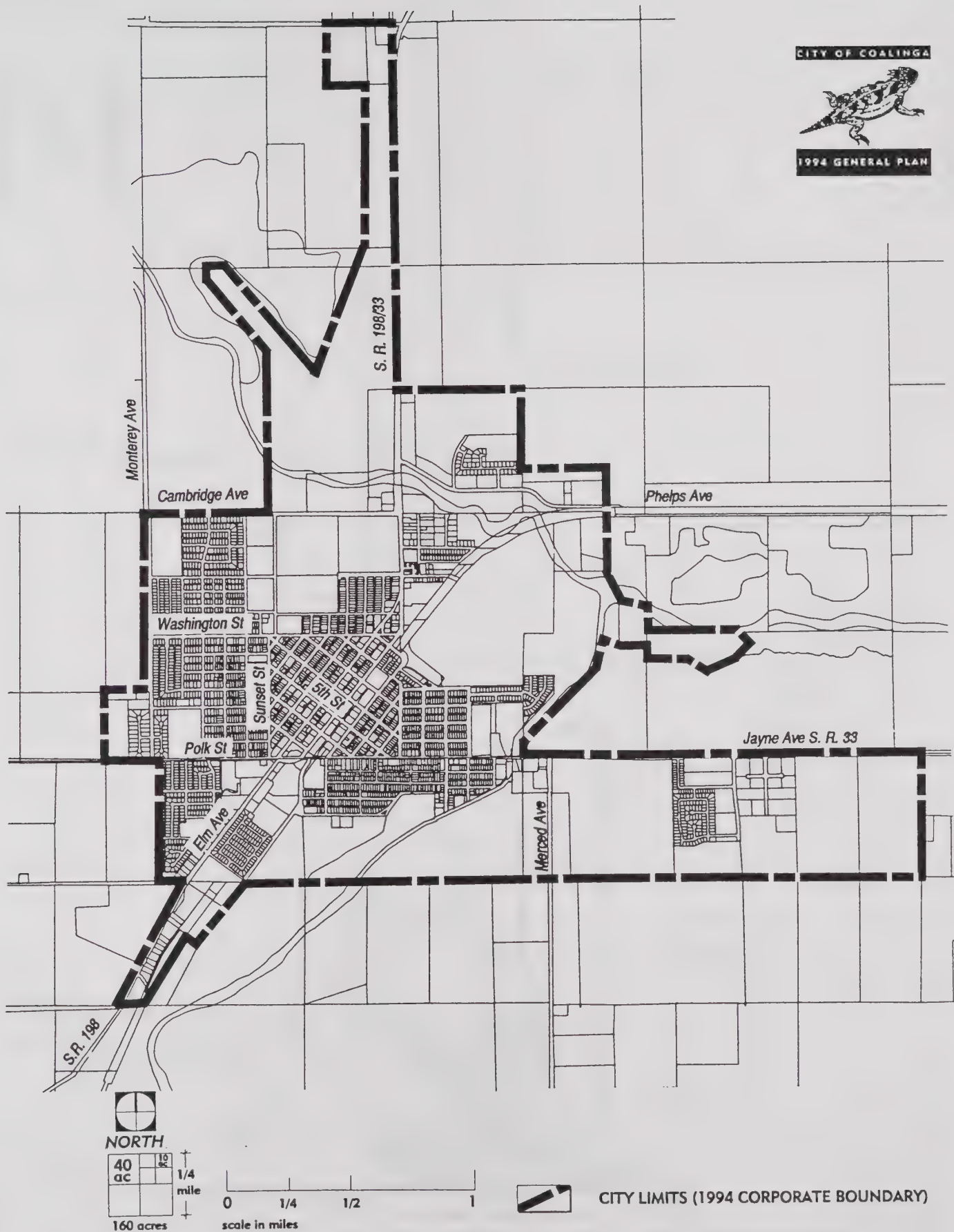
The various geographic areas considered in the General Plan (see Exhibits 1 and 2) are described as follows:

- 1) **City Boundary:** Also referred to as the City's "Corporate Boundary," it is that area over which the City has direct land use planning and zoning control.
- 2) **Sphere of Influence (SOI):** The SOI is that area within which the City will directly influence development over the 20-year planning period. It is a legally defined area established by the Fresno County Local Agency Formation Commission (LAFCO). The City makes recommendations to the County on land use policy, but the County has final jurisdiction in the SOI. The General Plan shows both the current as well as the proposed changes to the SOI.

The City expects new development within this area to be annexed. The Plan proposes several modifications to the SOI which the City will pursue with the Fresno LAFCO in the coming years. Yearly reviews and updates of the General Plan will reflect these changes. In addition, three non-contiguous areas are proposed for inclusion in the SOI (Re: State Code Section 56111).

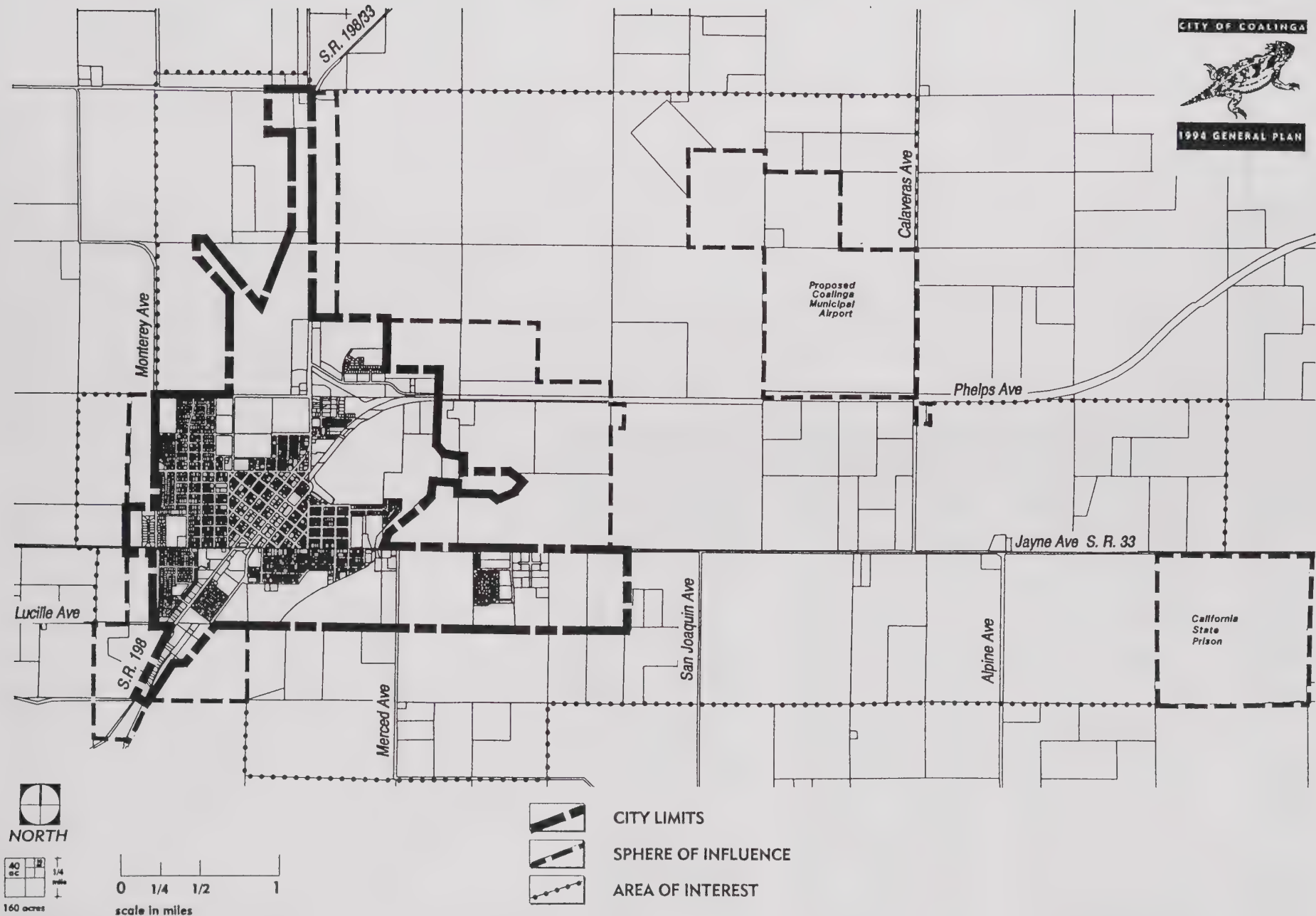
1. the California State Prison,
2. the Coalinga Municipal Airport,
3. the City Water Treatment Facility.

- 3) **Area of Interest:** This is an informal designation for properties of particular concern to Coalinga. The City does not plan to annex properties in this area. However, the Area of Interest does provide a linkage among the new airport, the prison, and the SOI. In most cases, the City provides utility service in the area of interest. Much of this property is held in large ownerships and is subject to agricultural conservation contracts. The County has land use and zoning jurisdiction in this area.



Source: City of Coalinga,
Planning Department, 1994

Exhibit 1 City Limits



Source: City of Coalinga,
Planning Department, 1994

Exhibit 2

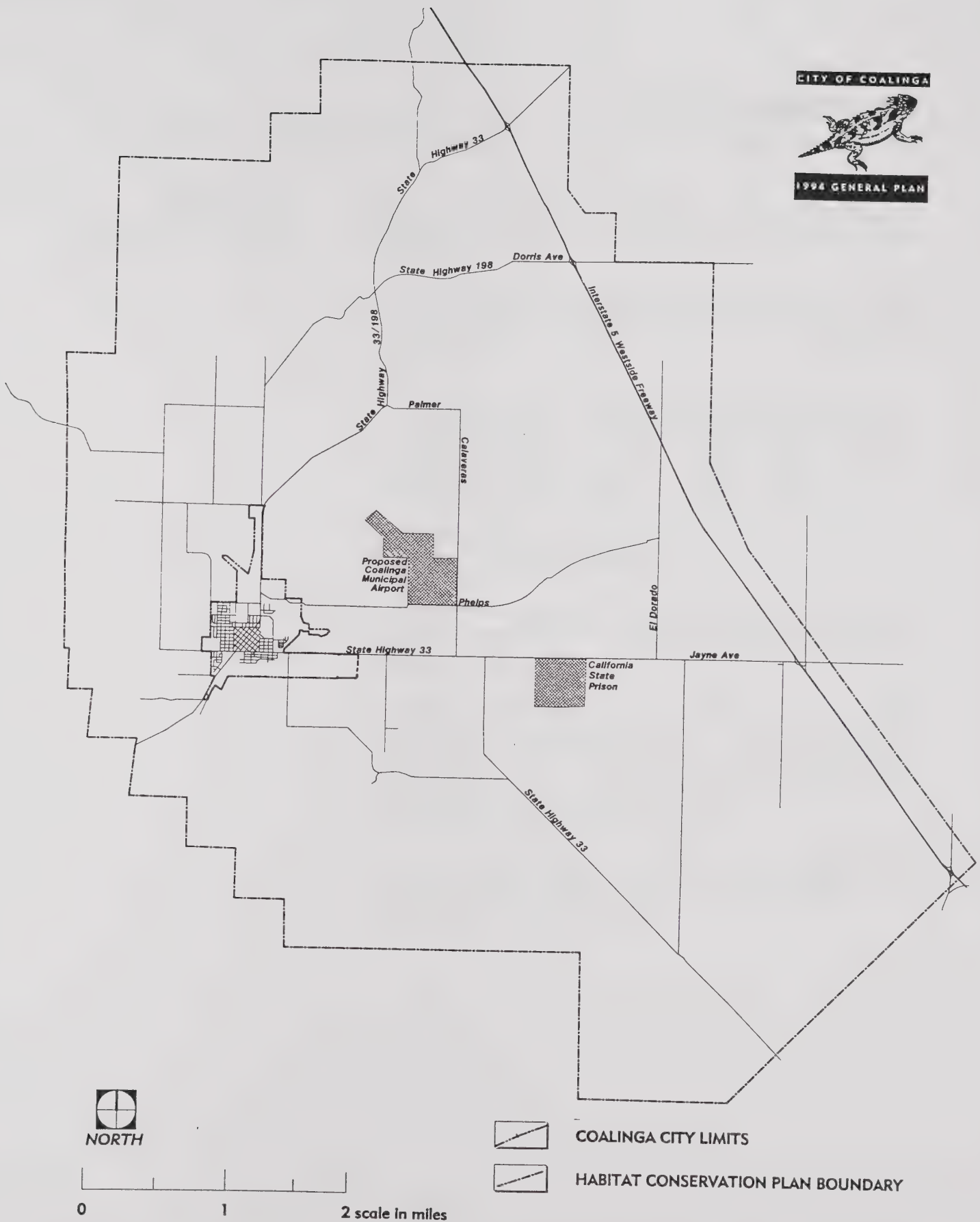
Sphere of Influence and Area of Interest

THE PLANNING AREAS

- 4) **Habitat Conservation Plan Area:** The Habitat Conservation Plan (HCP) Area is that area addressed by the Coalinga/Pleasant Valley Habitat Conservation Plan (see Exhibit 3). This plan is designed to provide for the protection of threatened and endangered species and their habitat, while allowing for continued development.

The City and its affiliated redevelopment agency are two members of a Joint Powers Authority (JPA) composed of the various jurisdictions with authority within the HCP area. The Coalinga General Plan includes a "Habitat Conservation" section which addresses the relationship and policy implications between the City of Coalinga and the HCP.

The HCP process began in 1990. The HCP is designed to avoid delays in project planning. The HCP will reduce development cost by eliminating the need for extensive biological surveys for a given site, providing a streamlined permit process, and reducing uncertainty as to compensation, obligations and mitigation measures.



Source: City of Coalinga,
Planning Department, 1994.

Exhibit 3 Habitat Conservation Plan Area

PLAN PRINCIPLES

Maintaining Coalinga's identity

This General Plan is predicated on a number of principles guiding the City's future. These principles include:

- The established, historical core of Coalinga should be maintained as the focus of the community's identity.
- Future growth in Coalinga should occur around the established core, enabling the efficient use of existing roadway patterns, utility infrastructure, commercial areas, and recreational space.
- Growth should not occur haphazardly as scattered, "leap-frog" development.
- New residential and commercial development on vacant land within the established city core is a high priority.
- Future residential development throughout Coalinga is expected to occur at an average net density of about 3.6 dwelling units (ie., house, apartment, condo, mobile home, etc.) per acre of residentially designated property.
- Coalinga's average household size is expected to remain at the 1990 figure of approximately 2.8 persons per dwelling unit.

PLAN PRINCIPLES

- The General Plan allows for a carrying capacity, or a buildout, in 20 years of about 6,700 units. These units will house approximately 16,300 people. Buildout potential is tied directly to the availability of water. All of the drinking water used in Coalinga must be imported and subject to severe limitation during times of drought.

USE OF THE PLAN

The General Plan is designed for use by the following:

- City Council in decision-making activities;
- City staff in review of development programs and projects;
- The development community in preparing development proposals; and
- Citizens in understanding the factors which affect the development of property and the City's policy towards future growth.

PLAN PREPARATION

A plan based upon public participation

Citizen participation played an important role in preparing the Coalinga General Plan. Because the General Plan needs to reflect community goals and aspirations, citizens were involved with issues identification and goal formulation. Throughout the Plan preparation stage, numerous residents, business owners and various civic and professional organizations were consulted.

The Coalinga Planning Commission played a key role in providing advice to the City's General Plan consultant and to City staff regarding the content of the General Plan. Discussions at a series of public workshops conducted by the Planning Commission assisted in the identification and the refinement of planning issues, and in the development of a preferred land use policy map. Citizen groups and individuals participated in the preparation of the General Plan through attendance at the General Plan public study sessions and at public hearings. This document is based upon consensus identification of community goals and policies.

ORGANIZATION OF THE PLAN

A Unique Format

The Coalinga General Plan has a unique format (see Exhibit 4) intended to make the plan a more "user friendly" document, while meeting requisite legal requirements. An introduction to the Plan's content and structure is found in the Preface.

The Coalinga General Plan is designed for daily use by City staff, as a clear articulation of City policy for use at Planning Commission and City Council meetings, and as a document which the general public will find easy to read and understand. The Plan relies heavily on graphics and maps. Background data is organized so that it can be updated easily and has been separated from Plan policies and maps. The Plan also includes several integral, but separate documents, including the Housing Element, the Airport Land Use Plan, the Air Quality Element, and the Habitat Conservation Plan Summary.

Relationship to State Legal Requirements

Great care was taken to ensure that state legal requirements governing all aspects of the Plan's preparation, adoption and content are met. A table showing the relationship between sections of the Coalinga General Plan and State legal requirements is presented in Exhibit 5.

State law governing General Plans (the Planning and Zoning Law, California Government Code Section 65000-66025, Title 7. Planning and Land Use, Division 1. Planning and Zoning, Article 5. Authority for and Scope of General Plans) allows local jurisdictions considerable flexibility in the format and content of the General Plan.

**CITY OF COALINGA
1994 GENERAL PLAN**

CITY OF COALINGA



1994 GENERAL PLAN

**PART I
COALINGA PLAN 2015**

- Coalinga: Past, Present and Future
- The Setting
- The Planning Areas
- Plan Principles
- Use of the Plan
- Plan Preparation
- Organization of the General Plan
- Amendment of the Plan
- Related Plans and Programs
- Goals and Policies
- Land Use Classifications
- Maps and Standards - *topic areas include:*
 - Land Use Policy (City/Sphere of Influence,
Area of Interest, Habitat Conservation Area)*
 - Environmental Factors*
 - Circulation System*
 - Utility Systems*

**PART II
SPECIAL PLAN DOCUMENTS**

- Air Quality Element
- Airport Land Use Plan
- Housing Element
- Habitat Conservation Plan Summary

**PART III
PLANNING CONTEXT**

- Land Use - (past land use and
General Plan implications)
- Public Services
- Infrastructure (streets and utilities)
- Resource Conservation/Mineral Resources
- Recreation and Open Space
- Noise
- Public Safety

APPENDIX

- Environmental Impact Report (reference
document of plan impacts and alternatives)
- 1994 Air Quality Analysis
- 1994 Traffic Study
- 1993 Noise Evaluation
- General Plan Glossary

**Exhibit 4
Structure of the
Coalinga General Plan**

EXHIBIT 5

COALINGA GENERAL PLAN

RELATIONSHIP TO STATE GENERAL PLAN REQUIREMENTS

The General Plan is required and governed by: California Planning and Zoning Law, Title 7, Planning and Land Use, Division 1, Planning and Zoning, Chapter 3, Local Planning, Article 5, Authority for and Scope of General Plans.

State Law Section and Required General Plan Content	Location in the Coalinga General Plan Which Complies With A Specific Legal Requirement
<p>65302:</p> <ul style="list-style-type: none"> General Plan must state development policies. Include a diagram(s) and text setting forth the objectives, principles, standards and plan proposals. 	<ul style="list-style-type: none"> Part I - Goals and Policies. Part I - Plan Principles, Goals and Policies, Land Use Classifications, Map Land Use Policy Area of Interest, and Map 2 Land Use Policy, City and Sphere of Influence, Standards 1 and 2.
<p>65302(a):</p> <ul style="list-style-type: none"> The Land Use Element must designate the general distribution and general location and extent of the uses of land. Standards of population density and building intensity Areas subject to flooding 	<ul style="list-style-type: none"> Part I - Map 1 Land Use Policy Area of Interest, Map 2 Land Use Policy City and Sphere of Influence, Map 6 Public Facilities, Schools and Parks, and Part Airport Land Use Plan. Part I - Plan Principles and Land Use Classifications. Part I, Map 11 Flood Hazard areas.
<p>65302(b):</p> <ul style="list-style-type: none"> The Circulation Element must show the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities. 	<ul style="list-style-type: none"> Part I - Goals and Policies (Infrastructure Policies 1-5), Map 4 Roadway Plan and Street Section Standards, Map 5 Bikeways, Map 6 Public Facilities and Schools, Map 12 Regional Trail System and Bikeway, Standard 2 Bicycle/Trail Standards, Part II Air Quality Element which contains extensive discussion of vehicle trip reduction, transit and transportation related issues, and Airport Land Use Plan.
<p>65302(c):</p> <ul style="list-style-type: none"> Housing Element as provided in Article 10.6. 	<ul style="list-style-type: none"> Part II - Housing Element.

EXHIBIT 5
COALINGA GENERAL PLAN
RELATIONSHIP TO STATE GENERAL PLAN REQUIREMENTS
(continued)

State Law Section and Required General Plan Content	Location in the Coalinga General Plan Which Complies With A Specific Legal Requirement
<p>65302(d):</p> <ul style="list-style-type: none"> • Conservation Element for the conservation, development and utilization of natural resources including water, forests, soils, rivers and other waters, wildlife, minerals and other natural resources. 	<ul style="list-style-type: none"> • Part I - Map 3 Habitat Conservation Plan Key Policy Factors, Map 8 Water Services Area, Map 9 Water Storage and Significant Metering, Map 10 Flood Hazard Areas, Map 11 Mineral Resources and Agricultural Areas, and Part II - Habitat Conservation Plan Summary.
<p>65302(e): Open Space Element as provided in Article 10.5 (commencing with Section 65560); 65561.(a): preservation of open space land necessary; 65561(b): discourage premature and unnecessary conversions of open space; 65561(c): anticipate population increase; 65561(d): plan for the conservation and preservation of open-space lands.</p>	<ul style="list-style-type: none"> • Part I - Land Use Goals and Policies - (Policies 1, 4, 5, and 8), Map 3 Habitat Conservation Plan Key Policy Factors, Map 11 Mineral Resources and Agricultural Areas. Part II - Habitat Conservation Plan Summary - note: the Habitat Conservation Plan referenced and summarized in the General Plan encompasses 244 square miles and includes the entire geographic area addressed by the Coalinga General Plan. All requirements of Article 10.5 are met by the Habitat Conservation Plan.
<p>65302(f): Identify and appraise noise problems in the community and analyze and quantify current and projected noise levels from highways and streets, aviation, and stationary sources. Noise contours shall be shown for these sources.</p>	<ul style="list-style-type: none"> • Part I - Goals and Policies (Noise Policies 1-3), Map 12, Noise Contours, Standard 2 Noise Standards. Part II - Airport Land Use Plan.
<p>65302(g): Protect the community from unreasonable risks associated with seismically induced effects, geologic hazards, flooding and fires.</p>	<ul style="list-style-type: none"> • Part I - Goals and Policies (Public Safety Policies 1-4), Map 9 Water Storage and Significant Metering, Map 10 Flood Hazard Areas, Map 11 Mineral Resources and Agricultural Areas.

EXHIBIT 5
COALINGA GENERAL PLAN
RELATIONSHIP TO STATE GENERAL PLAN REQUIREMENTS
(continued)

Factors listed in State Legal requirements for inclusion in General Plans which do not apply to Coalinga:	Comment pertaining to the Coalinga General Plan
65302(a) timber production 65302(b) terminals 65302(d) forests harbors fisheries 65302(e) beaches and shores 66560 habitat for fish rivers bays and estuaries coastal beaches lake shores banks of rivers forest lands major mineral resources (except sand and gravel) earthquake fault zones unstable soils areas presenting high fire risk	Some portions of the Habitat Conservation Plan Area are forested, but none are within the Coalinga Planning Areas. See also comment re: 65302(g).
65302(f) noise problems (existing) freeways railroad rapid transit military airport operations jet engine testing railroad classification yards	Base studies undertaken during preparation of the General Plan (see Appendix D: 1993 Noise Study) identified no noise problems which could be mapped.
65302(g) tsunami dam failure mudslides subsidence liquefaction wildland fires	Some portions of the Habitat Conservation Plan area are subject to mudslides, landslides, subsidence, liquefaction and wildland fires, but none are within the Coalinga Planning Areas.

ORGANIZATION OF THE PLAN

Specific code sections relevant to this issue include the following:

65300.7 Local Implementation - "...the diversity of the state's communities and their residents requires planning agencies and legislative bodies to implement this article in ways that accommodate local conditions and circumstances, while meeting its minimum requirements.

65301.(a) Adoption and Format - "...all or individual elements of it (i.e., the plan) may be adopted...The general plan may be adopted in any format deemed appropriate or convenient by the legislative body, including the combining of elements...."

65301.(b) "The general plan may be adopted as a single document or as a group of documents relating to subjects or geographic segments of the planning area."

65301.(c) "...The degree of specificity and level of detail of the discussion of each element shall reflect local conditions and circumstances (excepting requirements for the housing element)...."

Part I: Coalinga Plan 2015

The plan is divided into two major parts. Part I contains information on the role and structure of the General Plan, geographic areas covered by the Plan, land use designation, goals and policies, standards and general plan policy maps.

Part II: Special Plan Documents

Part II contains several plan documents and elements which serve both as integral parts of the Plan and as separate planning documents. They include: the Air Quality Element, Airport Land Use Plan, Housing Element, and Habitat Conservation Plan Summary.

Part III: Planning Context

The Planning Context section provides background information on existing conditions and projects for the future. Part III is not a formally adopted part of the General Plan, but is an important adjunct to the Plan. In this way, it can be kept up to date without a General Plan amendment.

AMENDMENT OF THE PLAN

Recognizing the dynamic nature of the General Plan, state law provides for periodic review of the document to ensure that it is consistent with the conditions, values, expectations, and needs of the community. The General Plan Guidelines state:

A Plan for change

"The General Plan is a dynamic document because it is based on community values and an understanding of existing and projected conditions and needs, all of which continually change. Local governments should plan for change by establishing formal procedures for regularly monitoring, reviewing, and amending the General Plan. "

The General Plan will be amended from time to time as City objectives become more defined, as they shift, or as state law dictates. In addition, periodic revision of the Housing Element will reflect revisions in state requirements.

The General Plan sections are designed to be updated on a regular basis. Parts I and II of the Plan will be updated by General Plan amendment as changes occur. Changes to Part III will be updated administratively on a yearly basis on a "section update sheet" which follows each section of Part III.

A comprehensive update of the General Plan is scheduled to occur every five years. During this update process, information on the update sheets will be incorporated in the text of Part III, and map and table changes will be made.

RELATED PLANS AND PROGRAMS

In addition to locally adopted plans, Coalinga is affected by a number of regional policies, as well as by special agency and district plans, all of which relate to the General Plan. The following paragraphs briefly discuss these plans.

Air quality

San Joaquin Valley Air Quality Attainment Plan (1991): The San Joaquin Valley Air Quality Attainment Plan (AQAP) establishes policies and programs for the attainment of federal and state air quality standards. The Plan contains measures to reduce emissions of reactive organic compounds and nitrogen oxides, the two precursors to ozone. In addition to control measures, the Plan includes information about air quality trends and about emission forecasts.

Many policies and programs from the AQAP have been incorporated into the Air Quality section of the General Plan:

Transportation control

Transportation Control Measures: As an outgrowth of the 1991 Fresno County Air Quality Attainment Plan, the City of Coalinga is obligated to implement various transportation control measures which serve both to alleviate traffic congestion and to reduce photochemical smog. A number of these measures such as jobs/housing balance recommendations influence policy direction for the distribution of land uses within the City and have been included in this General Plan.

Congestion management

Fresno County Congestion Management Plan: State law requires that Fresno County create a Congestion Management Program (CMP) prior to the County receiving gas tax monies, made available through Proposition 111. The CMP represents an effort to manage traffic congestion by coordinating the many transportation, land use, and air quality programs in Fresno County. As part of this program, the City of Coalinga is required to adopt their own land use impact program and to establish policies to maintain LOS standards which are outlined in the Infrastructure section.

RELATED PLANS AND PROGRAMS

Seismic hazards

Seismic Hazards Mapping Act: The Seismic Hazards Mapping Act of 1990 calls for the delineation of seismic hazard zones; i.e. areas of high potential for liquefaction, earthquake induced landslides, and other ground failures. Hazard zone maps are expected to become available in the mid-1990s.

The principal role of the State is to identify seismic hazard study zones. Based on State prepared maps, the local government is charged with adopting policies to reduce the extent of earthquake damage. These policies are included in the Public Safety section to support the Seismic Hazards Mapping Act.

Emergency management

City of Coalinga Emergency Management Plan: The Emergency Management Plan provides the basis for disaster response planning in Coalinga. (See the Public Safety sections for additional information). The Plan addresses the jurisdiction's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. Operational data, including a listing of resources, key personnel, essential facilities, contacts, and other data needed for conducting emergency operations also is provided.

Hazardous waste

Fresno County Hazardous Waste Management Plan: The Hazardous Waste Management Plan is designed to ensure that safe, effective, and economical facilities for the management of hazardous wastes are available when they are needed. To attain this goal, the Plan establishes goals, policies, and programs to encourage the safe handling, storage, and transportation of hazardous materials.

The Public Safety section addresses the hazardous materials issue and incorporates policies from the County's Hazardous Waste Management Plan to manage hazardous materials.

RELATED PLANS AND PROGRAMS

Parks and recreation

Coalinga-Huron Parks and Recreation Master Plan: The Parks and Recreation District Master Plan forms a framework for the future provision and operation of active and passive parks, pedestrian and bicycle paths, recreation and leisure programs, and community service facilities which physically relate to parks provisions. This Plan includes two parts: an inventory of existing recreation facilities in Coalinga and a plan that specifies improvements for the future operation of each facility.

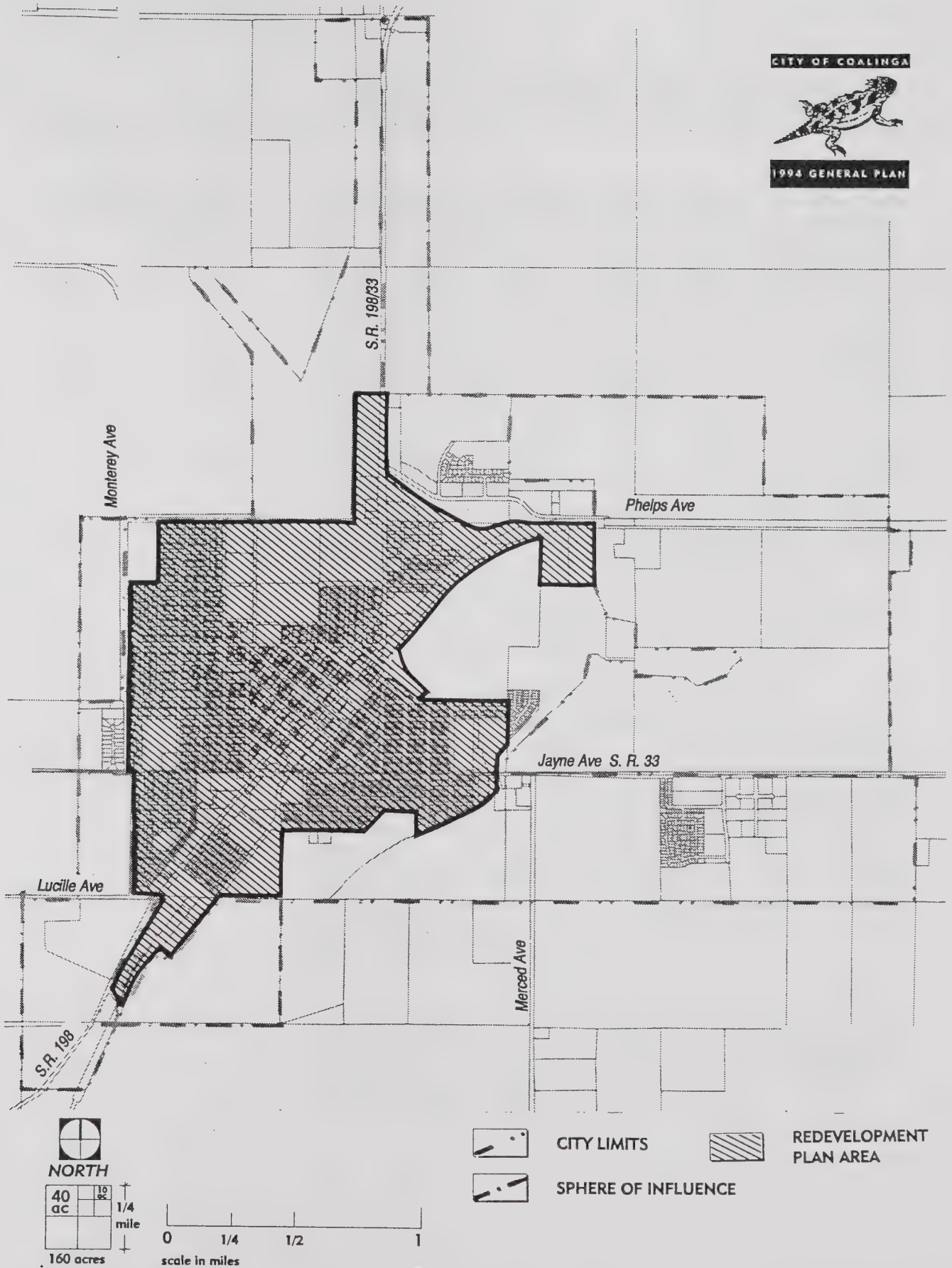
In addition, the Plan includes a summary of proposed expenditures and available funding sources.

This Plan served as the basis for the development of the parks and recreation portion of the General Plan.

Redevelopment

Community Redevelopment Law: California, through the Community Redevelopment Law (Health and Safety Code Sections 33000 et. seq.) authorizes a city to undertake redevelopment projects to revitalize blighted areas. An adopted plan provides additional tools to a city to effectuate productive change. These include the use of tax increment (i.e., amount of additional tax revenue above a "frozen" base generated by increased property valuations resulting from new development on the project). They also include property acquisition, consolidation of small parcels, joint public-private partnerships, clearance of land and resale to developers, and relocation of tenants. A minimum of twenty percent of the tax increment, in most cases, is used for the development of low and moderate income housing.

The Coalinga Redevelopment Plan has proved, and continues to be, a valuable redevelopment tool. This plan was initially developed and used to help the city rebuild after the 1983 earthquake. The Redevelopment Plan Area is shown on Exhibit 6.



Source: City of Coalinga,
Planning Department, 1994

Exhibit 6 Redevelopment Project Area

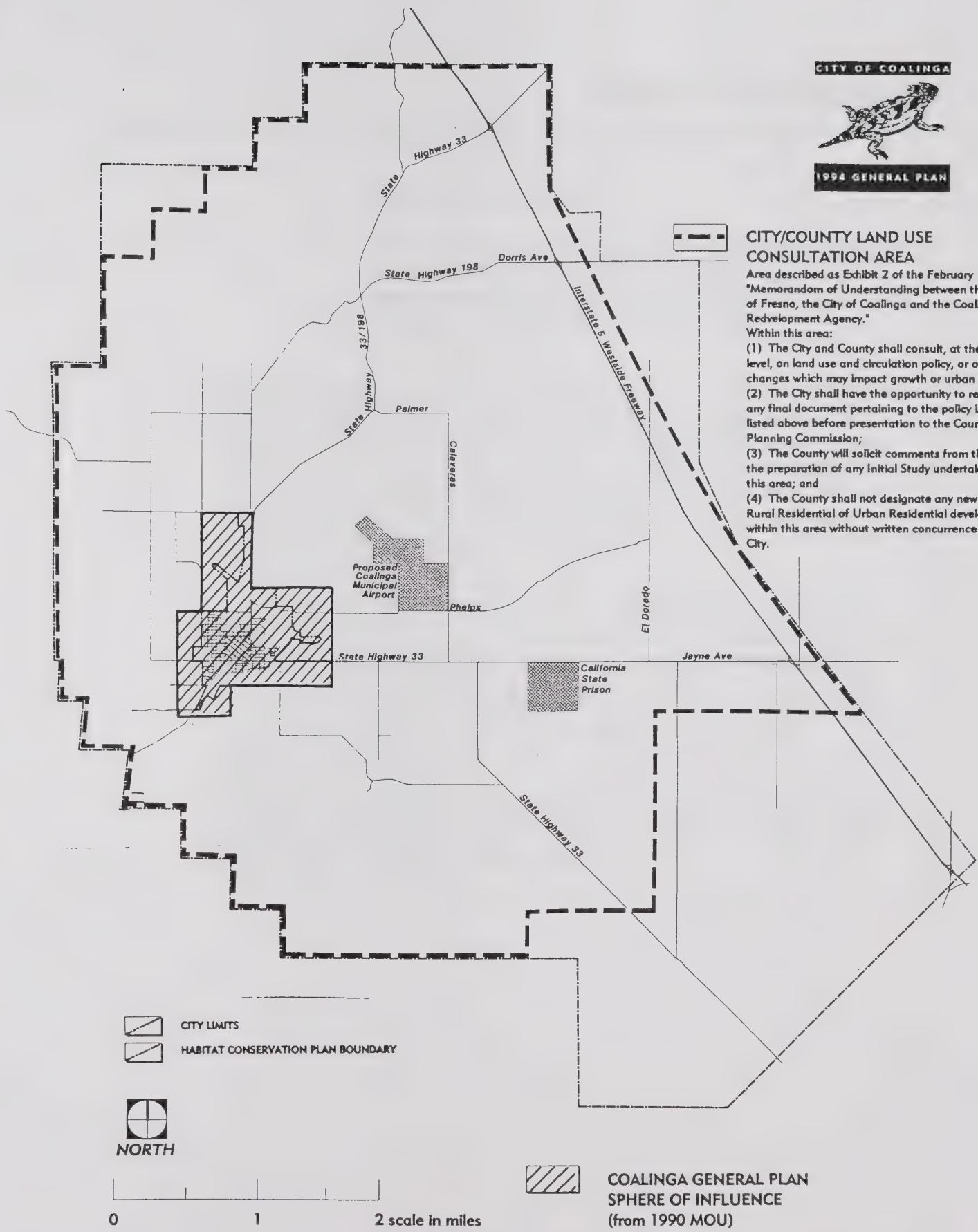
RELATED PLANS AND PROGRAMS

Annexation and Tax Sharing Agreement

City/County Tax Sharing Agreement: In 1990, the City of Coalinga, County of Fresno, and the Coalinga Redevelopment Agency executed a Memorandum of Understanding (MOU) to jointly share tax revenues resulting from development in areas annexed into the City after the date of the Agreement. The intent of the MOU is to distribute equitably the increased revenues from new development. The MOU also states that the County will: (1) not approve any discretionary development permits for new urban development within the City's Sphere of Influence (SOI) unless that development has first been referred to the City for annexation, and (2) that the County will oppose the creation of new governmental entities within the City's SOI. Provisions are made for development in the SOI which are not annexed to the City, however, development standards comparable to the City's must be applied to such development.

The MOU also addresses development for an extensive area outside of the City's corporate and SOI boundaries (see Exhibit 7). The City and County agree to consult on any policy changes which may impact land use or public services in this area. In addition, the City must be given the opportunity to respond to any land use/service related document before such a document is presented to the County Planning Commission. The County agrees to solicit comments from the City in the preparation of any Initial Study undertaken within the area.

Of particular importance to the Coalinga General Plan is a statement that the County will not designate any new areas for Rural Residential or Urban Residential development within the area shown on Exhibit 7 without written concurrence by the City.



CITY/COUNTY LAND USE CONSULTATION AREA

Area described as Exhibit 2 of the February 13, 1990 "Memorandum of Understanding between the County of Fresno, the City of Coalinga and the Coalinga Redevlopment Agency."

Within this area:

- (1) The City and County shall consult, at the staff level, on land use and circulation policy, or other changes which may impact growth or urban services;
- (2) The City shall have the opportunity to respond to any final document pertaining to the policy issues listed above before presentation to the County Planning Commission;
- (3) The County will solicit comments from the City in the preparation of any Initial Study undertaken within this area; and
- (4) The County shall not designate any new areas for Rural Residential or Urban Residential development within this area without written concurrence by the City.

Source: City of Coalinga,
 Planning Department, 1994.

Exhibit 7 Tax Sharing Agreement Area

GOALS AND POLICIES

Goals and Policies

The General Plan sets forth the following set of interrelated and internally consistent goals and policies designed to guide City decision making and manage growth through the year 2015.

Goal 1: Preservation of town character	Retention and enhancement of the positive aspects of Coalinga's small town atmosphere, strengthening established neighborhoods, and establishing strong linkages between the town core and growth areas.
Goal 2: Diversification of the economic base	Facilitating Coalinga's role as a center for agriculture, for oil industry services, for support to the State Department of Corrections, for western Fresno County education; as a center for health services; and as a residential community.
Goal 3: Quality public services	Continuing the City's ongoing commitment to maintain full services to the community.

GOALS AND POLICIES

Land Use Policies	<ol style="list-style-type: none">1. Preserve and maintain Coalinga's small town character through encouragement of infill development, mixed-use projects, protection of established neighborhoods, maintaining street trees, and discouraging "leap-frog" development.2. Actively encourage expanded commercial/retail shopping opportunities and employment generating uses, especially as infill uses.3. Establish connections between the older commercial district along Elm Avenue and Coalinga Plaza and newly developing commercial uses along Elm Avenue and Polk Street.4. Preserve open space to the greatest extent possible through use of the HCP.5. Expand recreational opportunities through land dedication and support of the Habitat Conservation Plan.6. Support measures contained in the Habitat Conservation Plan calling for the preservation of sensitive wildlife habitats and agricultural lands.7. Enhance the economic vitality, liveability, and appearance of Elm Avenue and Polk Street by preparing comprehensive plans for these specific areas.
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GOALS AND POLICIES

Land Use Policies (cont'd.)	<ol style="list-style-type: none">8. In newly developing areas and, generally, on large tracts of land away from the core community, require these lands to be classified in the General Plan and Zoning Code as Planned Development (PD).9. Establish a mixed use zoning classification based on specific performance standards.10. Reuse of the College Farms area will include consideration of relocation of the College Farms uses and the City's waste-water treatment facility in proximity to each other to facilitate the use of reclaimed water. Consideration will also be given to the location of a "green waste" recycling facility in conjunction with the College Farms and with the location of the farms and waste treatment facility as means of buffering the airport from urban uses.
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GOALS AND POLICIES

Infrastructure/ Circulation Policies	<ol style="list-style-type: none">1. Coordinate development with the provision of necessary circulation, utilities, and flood control facilities.2. Require new development to provide the necessary infrastructure to serve itself without reducing the effectiveness of existing facilities and services. (Provisions for future or expanded school facilities are not covered under this policy until the City, Redevelopment Agency, and the Local School District reach mutual agreement. Discussions were underway at the time of this Plan's adoption.)3. Utilize reclaimed wastewater for irrigating public and private lands wherever possible and where not precluded by public health concerns and laws.4. Strictly maintain the City's "Rural Residential Water Policy" (November 1, 1991) as a means for allocating City surplus water for areas outside of the City limits.5. The College School Farm will have first right of refusal to any use of reclaimed water from the waste water treatment plant.
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GOALS AND POLICIES

Infrastructure/ Circulation Policies (cont'd.)	<ol style="list-style-type: none">6. Prepare five year capital improvement plans for circulation, utilities, and flood control facilities. These plans shall adequately balance the needs of established neighborhoods and the older commercial district with newly developing areas.7. Require that all development, subsequent to the date of the General Plan's adoption, east of Warthan and Los Gatos creeks, pay a bridge impact fee, the amount to be determined on approval of street and capital improvement plans.
Resource/ Conservation Policies	<ol style="list-style-type: none">1. Encourage innovative site planning and building designs which minimize energy consumption by taking advantage of sun/shade patterns, prevailing winds, landscaping, and building materials.2. Maintain local legislation to establish, update, and implement energy performance building code requirements in accordance with State Title 24 energy regulations.

GOALS AND POLICIES

Public Safety Policies	<ol style="list-style-type: none">1. Review and regularly update the City's emergency preparedness plan and network in order to guarantee the safety of, and accessibility to, all residents in the event of an earthquake or other emergency situation.2. Incorporate guidelines and recommendations resulting from AB 3897 and the Seismic Hazards Mapping Act, as they become available, into the zoning ordinance and other City policy documents, codes, and guidelines as appropriate.3. Develop and implement a long-range program for replacing aging storm drainage system components.4. Develop and implement a plan to stabilize and protect the streambeds, and correct drainage system deficiencies, with emphasis on Warthan and Los Gatos Creeks.
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GOALS AND POLICIES

Noise Policies	<ol style="list-style-type: none">1. Ensure that noise mitigation measures and techniques are included in site planning, architecture, design, and construction projects in Coalinga.2. Ensure acceptable noise levels near schools, hospitals, convalescent homes, and other noise-sensitive areas, in accordance with the City's interior and exterior noise standards found in the General Plan.3. Adopt a comprehensive noise ordinance to regulate hours of operation and control excessive noise from construction activity, lawn blowers, trimmers, street sweepers, machinery, and other disturbances.
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GOALS AND POLICIES

Hazardous Materials	<ol style="list-style-type: none">1. The City will sponsor regular household hazardous waste disposal programs to enable residents to bring backyard pesticides, cleaning fluids, paint cans, and other common household toxics to a centralized collection center for proper disposal.2. Vigorously prosecute unlicensed dumping of toxic or hazardous materials into the ground or the water in Coalinga. Encourage citizens to report illegal dumping when they see it.3. Support efforts to enforce state "right to know" laws, which outline the public's right to information about local toxics producers. Monitor businesses that generate hazardous wastes to ensure compliance with approved disposal procedures.
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GOALS AND POLICIES

Fire and Police Protection	<ol style="list-style-type: none">1. Periodically evaluate fire protection services and service criteria to ensure that Coalinga continues to receive adequate fire protection and prevention, and assess the impact of incremental increases in development and traffic congestion on fire hazards and on emergency response time.2. Require each new development to pay for the increased fire protection necessitated by that particular development.3. Continue to support the Coalinga Fire Department's instant aid agreement with the Fire Protection District.4. Periodically evaluate police services and service criteria to ensure that Coalinga continues to receive adequate police protection, and cooperate with the Fresno County Sheriff's Department to provide back-up police assistance in emergency situations.5. Enhance public awareness and participation in crime prevention. Develop new and expand existing educational programs, in both English and Spanish, dealing with personal safety awareness, such as community based policing, neighborhood watch, and commercial association watch/protection programs.
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LAND USE CLASSIFICATIONS

The General Plan defines the planned use of all land within the City's jurisdiction and the preferred policy for lands outside the City limits, but within the Area of Interest. Land use classifications are shown on General Plan Maps 1 and 2 in the next section and are described as follows:

Classification

Use, Density and Intensity

O *Open Space/ Conservation:*

Properties with significant physical constraints to development are included in this classification.

These properties are subject to one or more of the following conditions: is within a designated floodway, contains a fault rupture hazard area, has unstable geologic or soils conditions, exposes people to hazardous materials, or is designated significant wildlife corridors or habitat areas.

No residential or commercial use, except equestrian boarding and training and limited agricultural uses, is allowed within this classification. Sand and gravel extraction and passive recreation uses (e.g. bicycle and hiking trails) may be allowed as determined under city zoning procedures.

The maximum floor-to-area ratio (FAR) for any structure allowed in this area is 0.20:1.

The potential maximum intensity of development is described in terms of the number of dwelling units (i.e., a single house, apartment, condominium, or mobile home is one dwelling unit) per gross acre (a gross acre includes streets, etc.) for residential uses. For all other uses, development intensity is described as the ratio of a building's floor area to the total site area of the building (i.e., FAR or Floor Area Ratio). For example, the FAR for a 21,780 sq. foot building on a one acre (43,560 sq. feet) site would be .50:1 since 21,780 sq. feet is one-half of an acre. See the Appendix D Glossary for an illustration and comprehensive definition of dwelling units per acre and Floor Area Ratio.

LAND USE CLASSIFICATIONS

- A** *Agriculture* This classification is designed intensive agriculture and related uses.
- The development density is five gross acres minimum size; two dwelling units/gross acre between five and 20 acres, one dwelling unit/10 gross acres for each 10 acres over 20 acres.
-
- RE** *Estate
Residential* This designation applies to large-lot single-family residential (i.e., one single-family residence per lot) developments. This designation applies to areas to the west and south of developed portions of the community and is intended to serve as a buffer between urban areas and lands subject to the HCP Habitat Conservation Plan "wildlife conservation area". Equestrian oriented development with public linkages to the regional trails system are strongly encouraged.
- The maximum development density is one dwelling per one-half gross acre density.
-
- RSF** *Single-family
Residential* This designation applies to single-family detached housing units on lots with a minimum size of 6,600 square feet.
- Development requires a full range of urban levels of service and public improvements. On large parcels, development should be concentrated in more developable areas with large contiguous areas left in open space.
- The maximum development density is six dwelling units/gross acre.

LAND USE CLASSIFICATIONS

RML
***Multi-family (low
density) Residential***

This designation is for single-family small lot subdivisions and attached townhouses. No buildings over two and one-half stories are allowed.

Low and moderate income housing can be developed at this density with density bonuses to reduce housing cost.

The maximum development density is 15 dwelling units/gross acre.

RMM ***Multi-family
residential
(medium density)***

Higher density condominiums and apartments of up to three stories are allowed in these areas.

Low and moderate-income housing can be developed at this density with density bonuses to reduce housing cost. On large parcels (ie., five or more acres), development should be concentrated with large contiguous areas left in open space.

The maximum development density is 25 dwelling units/gross acre.

MX ***Mixed-Use***

This designation encourages a mix of residential and commercial uses.

The designation typically applies to urbanized portions of the community and is focused towards infill and reuse projects.

All uses allowed in the CG (General Commercial) and CS (Service Commercial) designation are allowed in the MX area. Exclusive residential development and mixed residential/ commercial development is subject to the PD (Planned Development Overlay) requirements. Residential uses on a given parcel must not exceed 15 dwelling units/gross acre as described under the RM~~Q~~_L (Multi-family Low-Density Residential) General Plan designation.

LAND USE CLASSIFICATIONS

CG

*General
Commercial*

The retail commercial land use category is used to indicate areas of concentrated retail use. The concentration of retail stores at Elm Avenue and Coalinga Plaza is the principal example of this category in the City.

In addition, the CG designation is also applied to other concentrations of retail uses, generally located adjacent to major streets. The CG areas contain food, drug, clothing, and other retail uses and services such as small restaurants, laundry outlets, etc.

Hotels and motels are permitted in CG areas, subject to zoning regulations.

Medical and professional offices are permitted within this designation, subject to zoning restrictions.

The development intensity is 0.55:1 FAR, with a 38-foot maximum building height limit.



LAND USE CLASSIFICATIONS

CS	<i>Service Commercial</i>	<p>Allows for a full range of retail and service uses for which a shopper usually makes a single-purpose trip to visit one establishment. Such uses include repair facilities, building materials and industrial supplies, and auto and accessories dealers.</p> <p>In addition, light manufacturing/distributing uses which include wholesale and/or retail outlets are included in this category.</p> <p>The development intensity is 0.55:1 FAR, with a 38-foot maximum building height limit.</p>
MB	<i>Manufacturing/ Business</i>	<p>Both large and small scale businesses which are involved in light manufacturing, distribution, or services fall within this designation. City zoning regulations distinguish between light and heavy manufacturing uses covered within this single category. Office/manufacturing "condominiums" and wholesale-to-the-public outlets are encouraged in MB designated areas.</p> <p>The development intensity is 0.75:1, with a 40-foot maximum building height limit.</p>
PF	<i>Public Facilities</i>	<p>Includes all City, County and other governmental and agency properties, such as the post office, the Civic Center, public schools and playgrounds, and fire stations. Public Facilities also include public utilities rights-of-way.</p> <p>The development intensity is 0.50:1 FAR, with a 35-ft. maximum building height limit.</p>

LAND USE CLASSIFICATIONS

RC *Recreation
Facilities* Applies to public and private recreation facilities, including public parks, golf courses, and equestrian centers.

The development intensity for this area is 0.25:1 FAR, with a 38-foot maximum building height limit.

Overlay Designations

P *Parking Overlay:* Applies to non-residential areas, to ensure that adequate parking is available for commercial activities.

PD *Planned
Development
Overlay* Applied to large (i.e. usually areas of 20-acre or greater) vacant parcels located on the periphery of developed portions of the community. Within these areas urban development is expected to expand during the 20-year planning period. In addition, the PD overlay applies to mixed commercial/residential and exclusively residential development in the MX (Mixed-Use) area.

The development density and intensity is 15 du/gross acre maximum residential density; 0.55:1 FAR for non-residential uses.

GENERAL PLAN POLICY MAPS AND STANDARDS

This section of the General Plan presents a series of annotated maps which illustrate General Plan Policy. These maps include text explanation of important policy related issues, as well as acreage quantifications and charts.

A listing of the maps and standards follows:

Map 1 Land Use Policy - Area of Interest

Map 2 Land Use Policy - City and Sphere

Map 1 shows the entire area considered by the General Plan, while Map 2 focuses on the area within the City and Sphere of Influence. These maps show the geographic distribution of the various land use designations presented in the "Land Use Designations" section of Part I. The City's ability to control land development consistent with the designations shown on Maps 1 and 2 is limited to the area within the City's Corporate boundary. This includes the issuance of development permits for projects found in conformance with the General Plan. The City is consulted by Fresno County concerning development proposals for areas within the Sphere of Influence and the Area of Interest. However, the County has jurisdiction over development applications and permits. The Sphere of Influence is a County designated area within which future urban development, and ultimately annexations to the City, are expected to occur.

Map 3 Habitat Conservation Plan (HCP) Key Policy Factors

Development within the HCP area is governed by a joint powers agreement between a number of governmental jurisdictions, including the City of Coalinga and Fresno County. The HCP addresses the management of wildlife habitat areas as the principal means to preserve a variety of rare and endangered plants and animals. An integral part of the HCP is an exhaustive discussion of land use policy concerning open space, recreation, oil production, and agriculture.

GENERAL PLAN POLICY MAPS AND STANDARDS

Map 4 Roadway Plan and Street Section Standards

This map illustrates the current and future roadway system in Coalinga using a classification system which describes a hierarchy of facility types. The categories of roadways included in this classification system differentiates the size, function and capacity of the roadway links for each type of roadway. Typical cross-sections for the major roadway classifications are also shown on Map 4. Coalinga's street system is designed to function at a Level of Service (LOS) C or better at a buildout population of 17,000. LOS C assumes that peak hour traffic will be no greater than 80% of a saturation flow rate of 1,700 vehicles per lane per hour. This is the generally accepted service level in a developed area.

Map 5 Bikeways and Trails Standards 1 Bicycle and Trails Standards

This map illustrates the City's ultimate bikeway and trail system and is followed by a series of trail standards. The system shown on this map will be implemented as development occurs and as funding becomes available.

Map 6 Public Facilities, Schools and Parks

This map shows the current and expected future location of public facilities, schools and parks within the planning area. No additional land within the City's corporate boundary is required for schools, parks or other public facilities.

Map 7 Major Utility and Service Lines

Map 8 Water Service Area

Map 9 Water Storage and Significant Metering

These maps illustrate key components of the City's water delivery and sewage collection system. Major water lines and storage facilities needed to serve future development are in place (1994). The relocation of the City's sewage treatment facility is expected to occur within the time frame of this General Plan.

GENERAL PLAN POLICY MAPS AND STANDARDS

Water and Sewer Master Plans, on file at the Coalinga City Planning Department, should be consulted for detailed information on proposed improvements to these systems. Other utility systems, including telephone, natural gas, and electricity were found adequate to serve current (1994) uses and could be easily expanded incrementally to accommodate potential future growth. All utility systems are discussed in Section III, Planning Context.

Map 10 Flood Hazard Areas

The federally designated 100-year flood zone is shown on this map. Development potential within this zone is limited and residential development required to obtain flood insurance. Specific sections of the City's Zoning Ordinance govern development within the flood zone. This map is currently preliminary (1994) and in the process of being updated.

Map 11 Mineral Resources and Agricultural Areas

Gravel extraction operations north of the "old" airport site are expected to continue, and to expand, during the 20-year plan period. These operations are controlled by state and local permits, which include measures to insure that the operations are adequately buffered from residential and other urban uses. The Plan does not envision future urbanization in the vicinity of the gravel operation.

Agricultural uses in the area of Interest, which are under Fresno County's land use jurisdiction, are designated to remain agriculture. Many of these properties are subject to agricultural conservation (Williamson Act) contracts.

Map 12 Regional Trail and Bikeway System

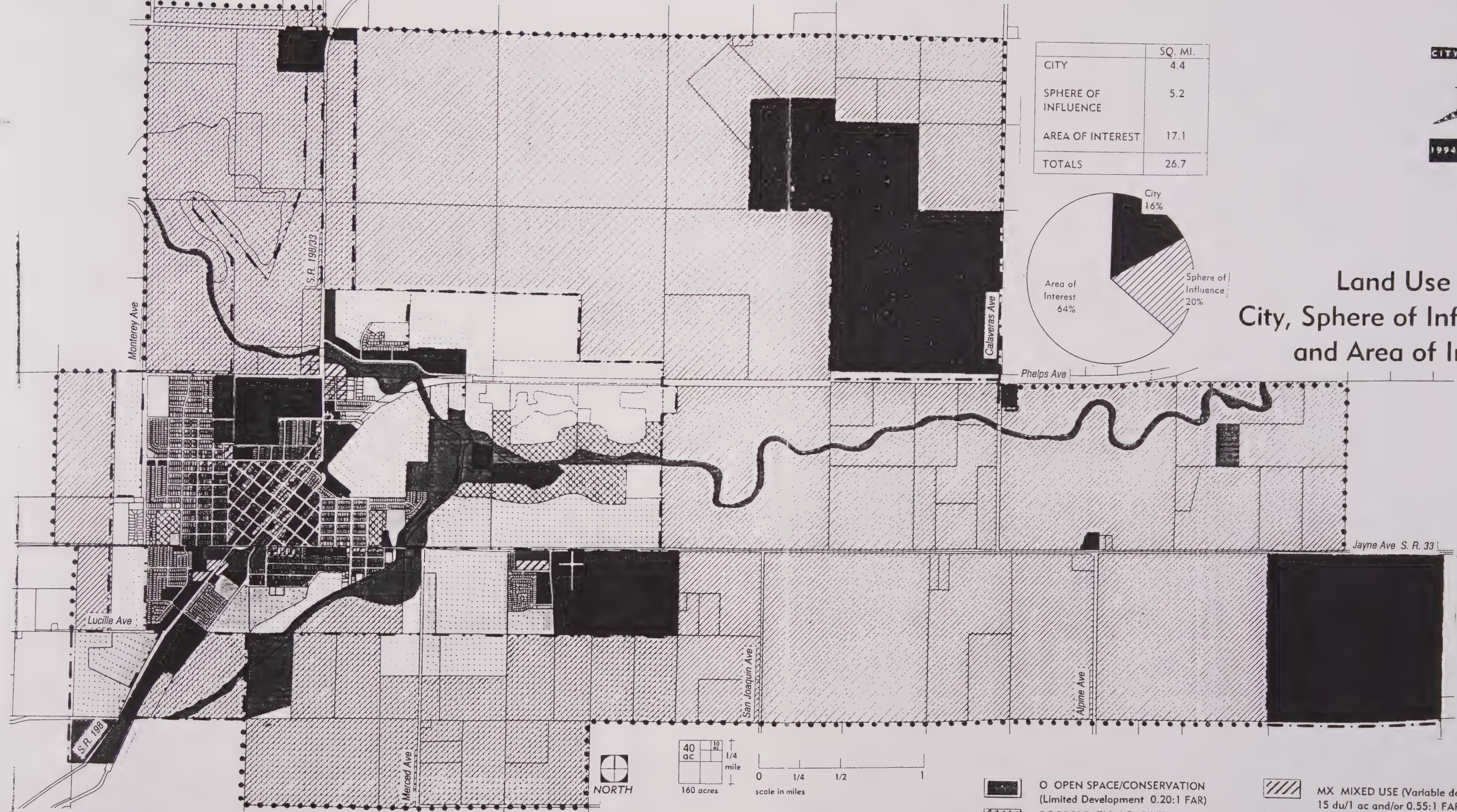
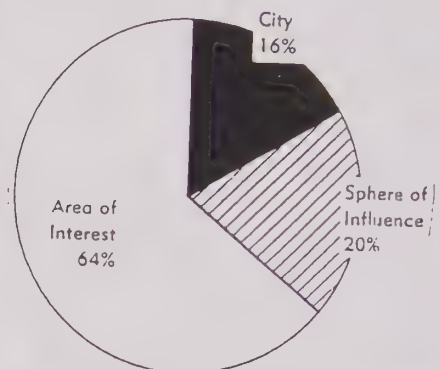
A proposed region-wide trail system.



Map 1

Land Use Policy: City, Sphere of Influence and Area of Interest

	SQ. MI.
CITY	4.4
SPHERE OF INFLUENCE	5.2
AREA OF INTEREST	17.1
TOTALS	26.7

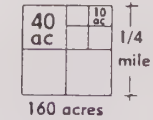


Source: City of Coalinga,
Department of Planning, 1994.

Note: Land Use Policy for areas
outside of the City Corporate Boundary
is advisory only, final determination is
by the County of Fresno.



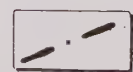
Cotton/Beland/Associates, Inc.



0 1/4 1/2 1
scale in miles



CITY LIMITS



SPHERE OF INFLUENCE



AREA OF INTEREST



O OPEN SPACE/CONSERVATION
(Limited Development 0.20:1 FAR)



RC RECREATION FACILITIES
(.25:1 FAR)



A AGRICULTURE
(2 du/5-20 ac, 1 du./10 ac over 20 ac)



ER ESTATE RESIDENTIAL
(2 du/1 ac)



RSF SINGLE-FAMILY RESIDENTIAL
(6 du/1 ac)



RML MULTI-FAMILY (LOW DENSITY)
RESIDENTIAL (15 du/1 ac)



RMM MULTI-FAMILY (MEDIUM
DENSITY) RESIDENTIAL (25 du/1 ac)



MX MIXED USE (Variable density,
15 du/1 ac and/or 0.55:1 FAR)



CG GENERAL COMMERCIAL
(0.55:1 FAR)



CS SERVICE COMMERCIAL
(0.55:1 FAR)



MB MANUFACTURING/BUSINESS
(0.75:1 FAR)



PF PUBLIC FACILITIES
(0.50:1 FAR)

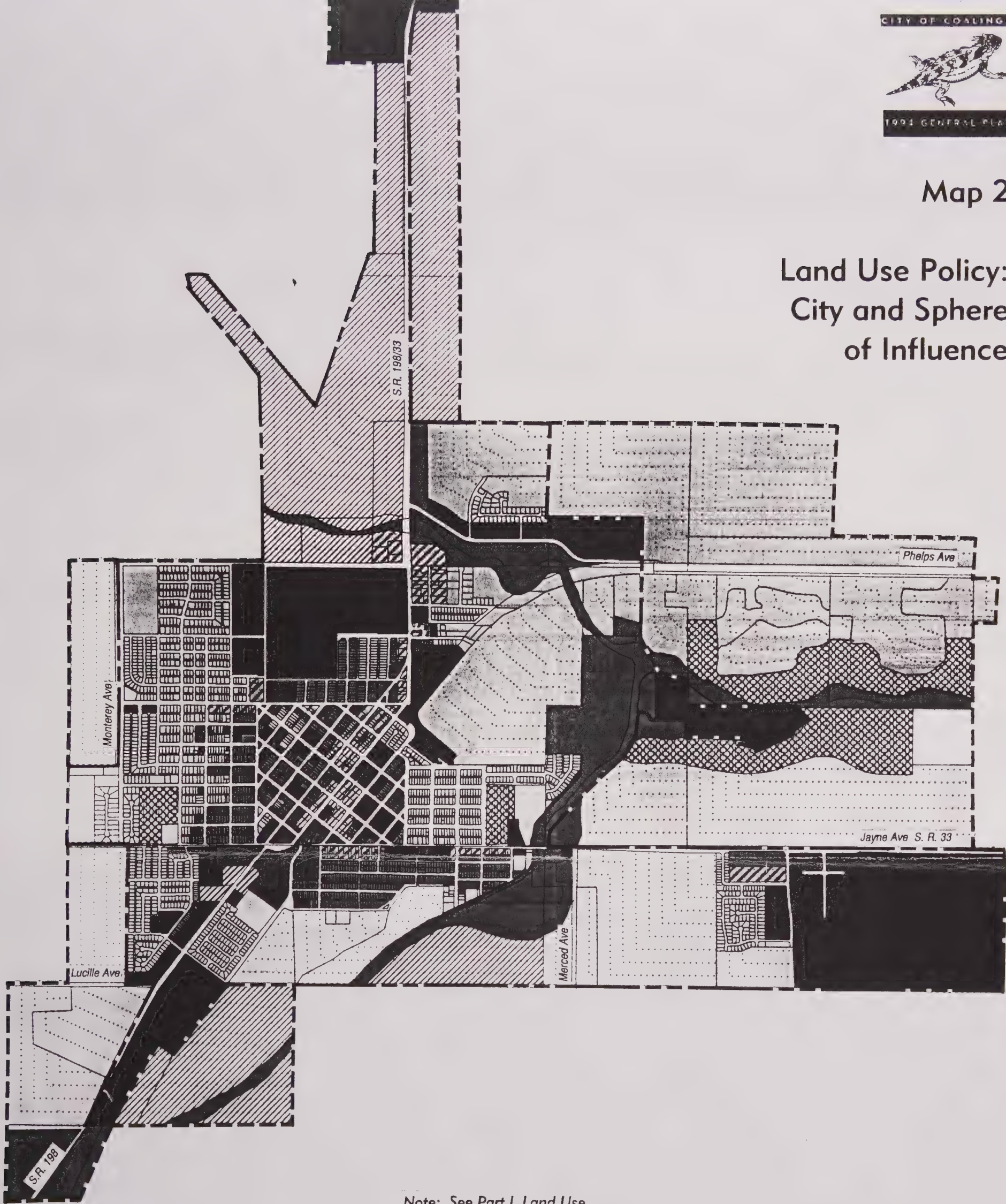


PD PLANNED DEVELOPMENT OVERLAY
(15 du/1 ac or 0.55:1 FAR)

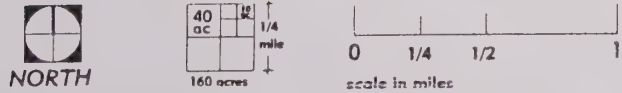


Map 2

Land Use Policy:
City and Sphere
of Influence



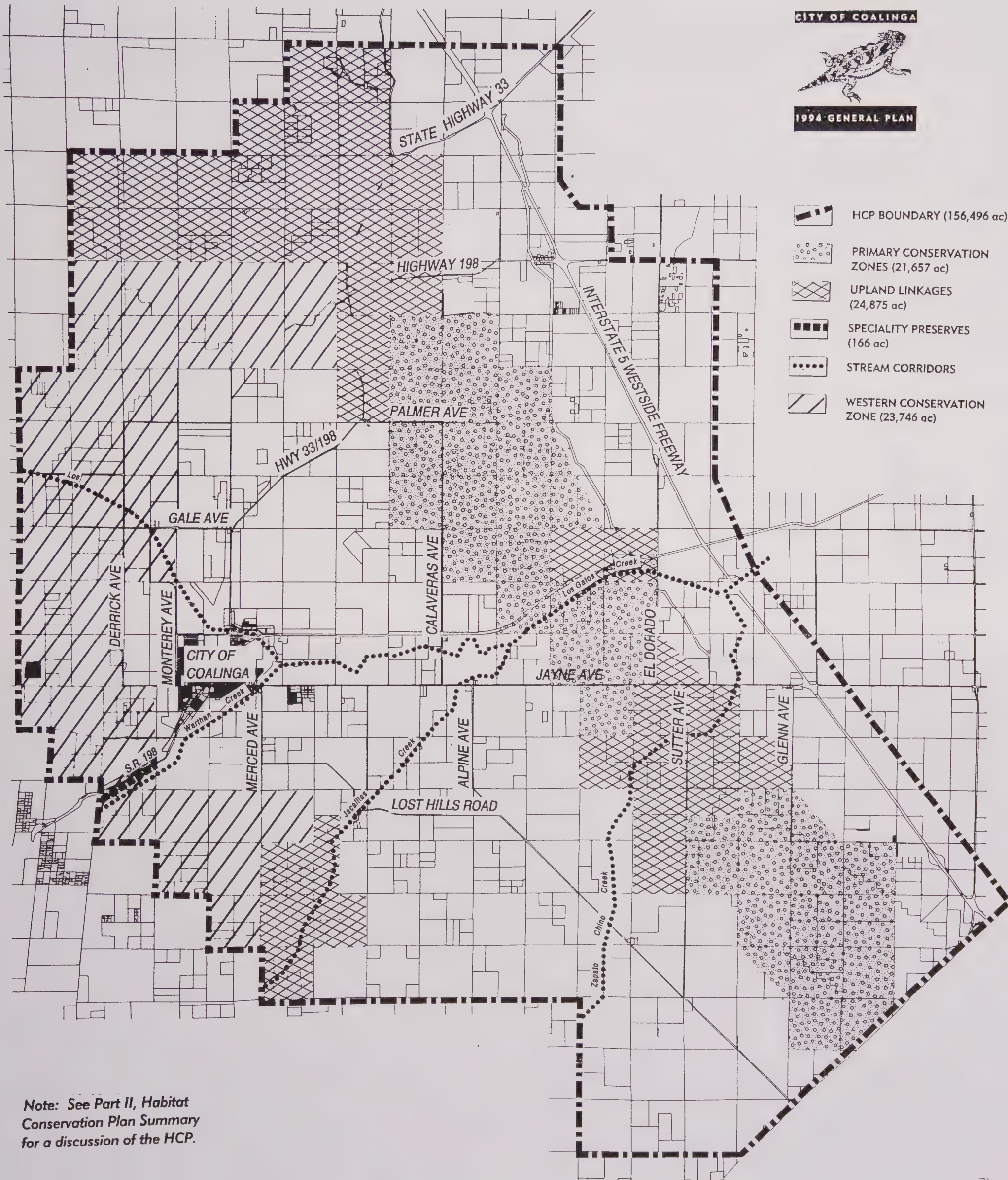
Note: See Part I, Land Use
Classifications, Part II, Housing
Element, and Part III, Section A
Land Use, for discussion of
existing land use and future
growth



- Legend
- CITY LIMITS
 - SPHERE OF INFLUENCE

Source: City of Coalinga,
Department of Planning, 1994.

- O OPEN SPACE/CONSERVATION
(Limited Development 0.20:1 FAR)
- RC RECREATION FACILITIES
(.25:1 FAR)
- A AGRICULTURE
(2 du/5-20 ac, 1 du./10 ac over 20 ac)
- ER ESTATE RESIDENTIAL
(2 du/1 ac)
- RSF SINGLE-FAMILY RESIDENTIAL
(6 du/1 ac)
- RML MULTI-FAMILY (LOW DENSITY)
RESIDENTIAL (15 du/1 ac)
- RMM MULTI-FAMILY (MEDIUM
DENSITY) RESIDENTIAL (25 du/1 ac)
- MX MIXED USE (Variable density,
15 du/1 ac and/or 0.55:1 FAR)
- CG GENERAL COMMERCIAL
(0.55:1 FAR)
- CS SERVICE COMMERCIAL
(0.55:1 FAR)
- MB MANUFACTURING/BUSINESS
(0.75:1 FAR)
- PF PUBLIC FACILITIES
(0.50:1 FAR)
- PD PLANNED DEVELOPMENT OVERLAY
(15 du/1 ac or 0.55:1 FAR)



Map 3

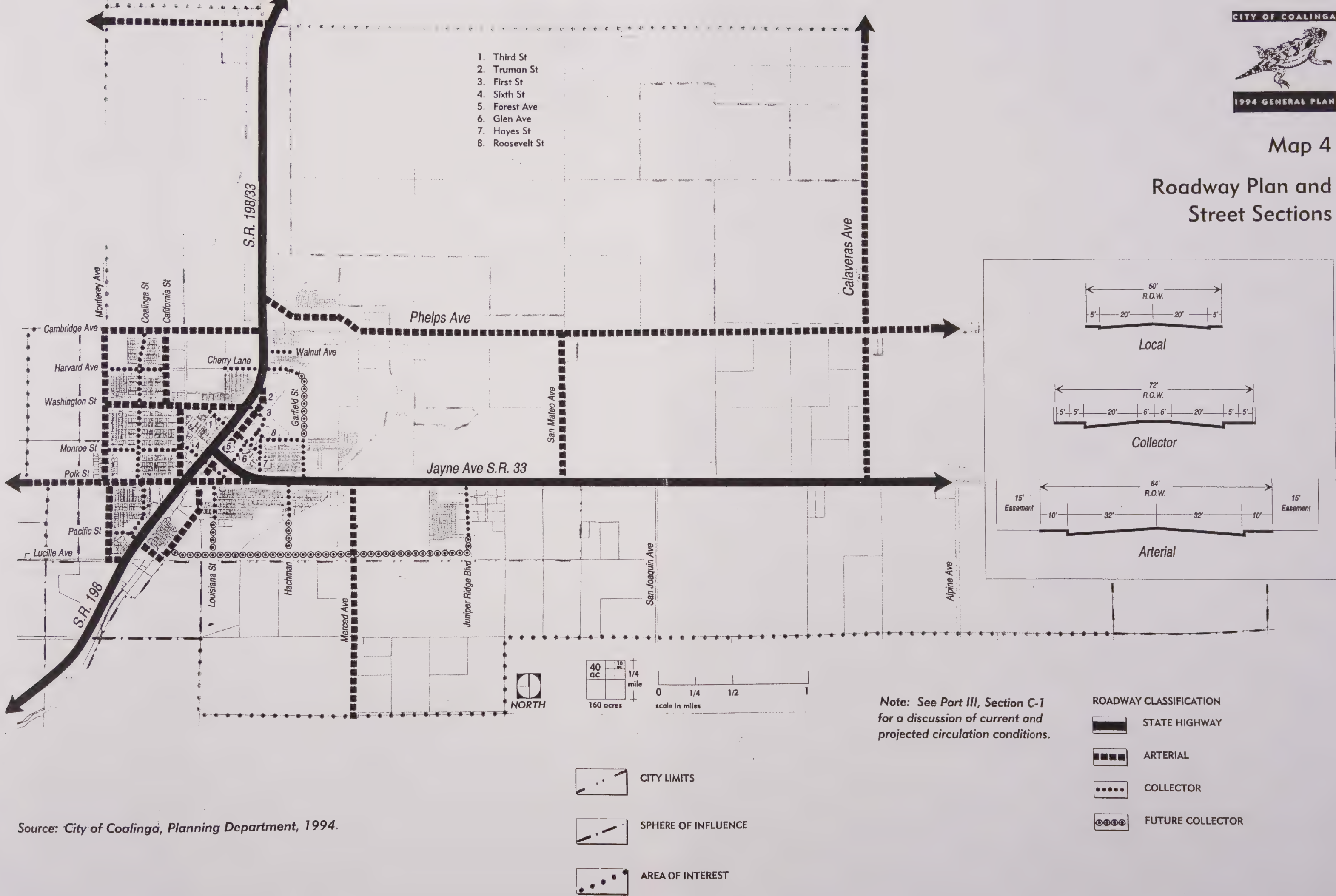
Source: Habitat Conservation Plan, 1994

Habitat Conservation Plan Conservation Strategy



Map 4

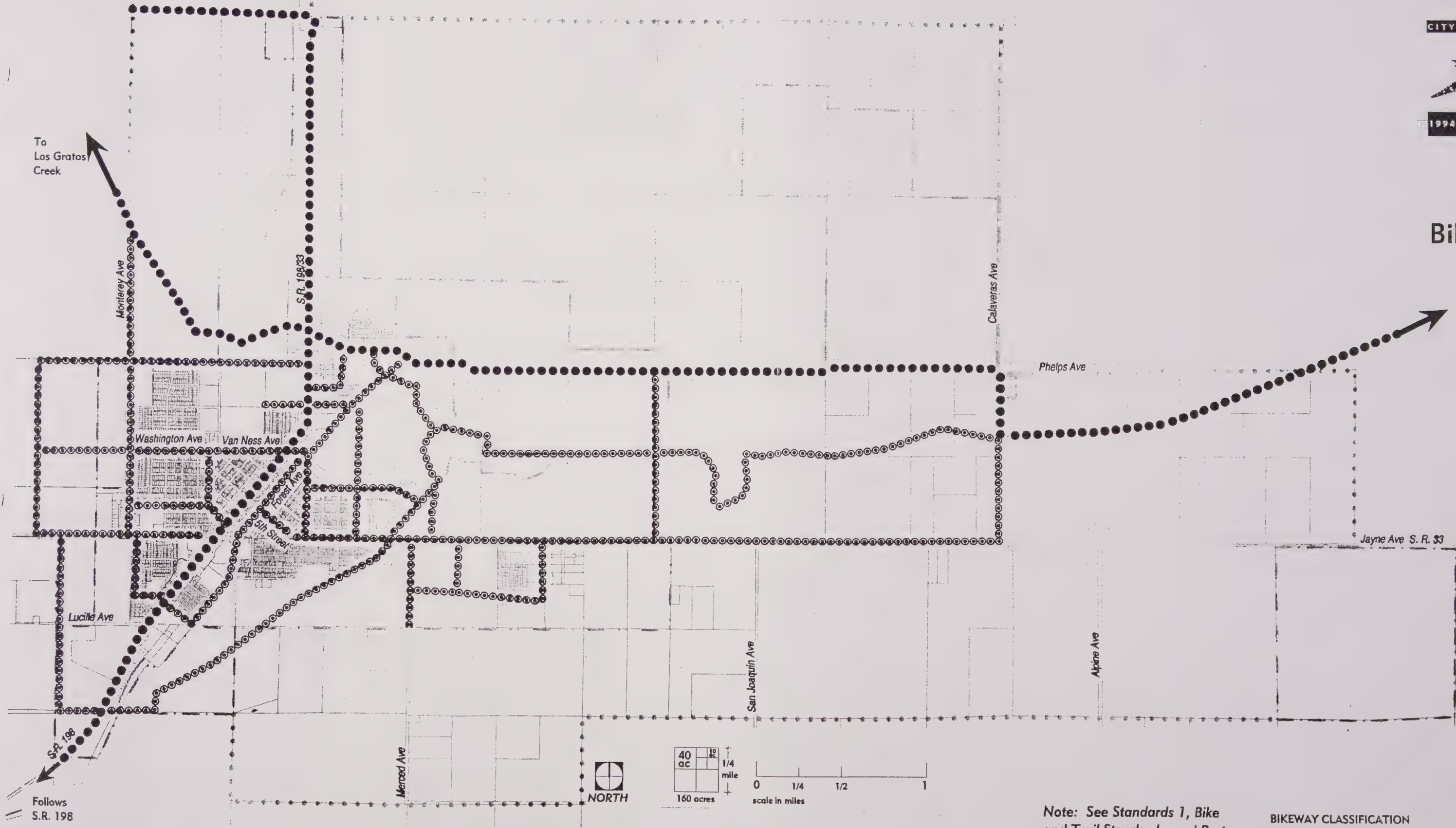
Roadway Plan and Street Sections



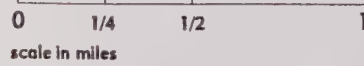
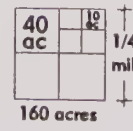
Source: City of Coalinga, Planning Department, 1994.



Map 5 Bikeways



Source: City of Coalinga, Planning Department, 1994;
Fresno County Bikeway Plan (1992 draft).



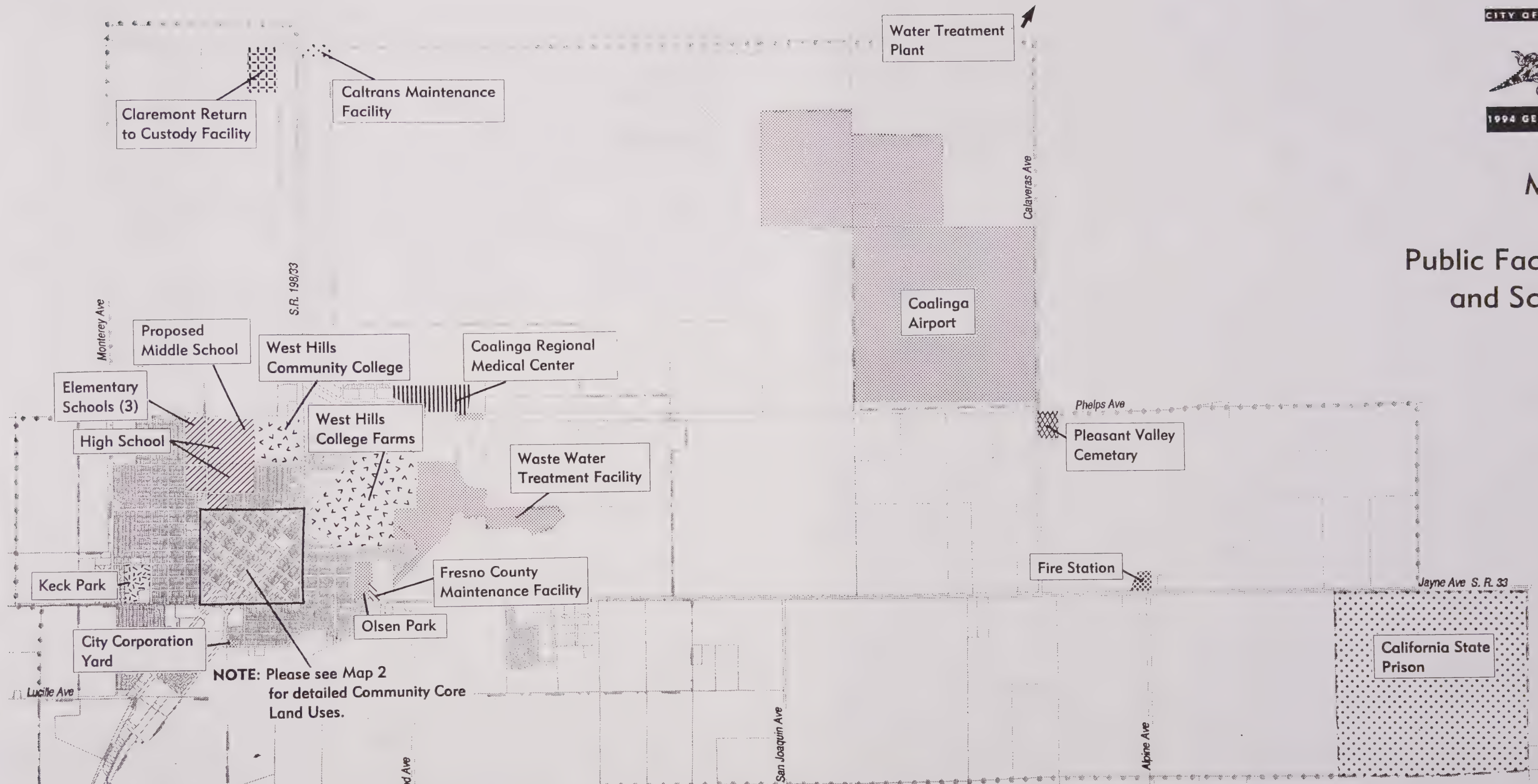
Note: See Standards 1, Bike and Trail Standards, and Part III, E-2 for a discussion of trails.

- BIKEWAY CLASSIFICATION
- LOCAL
 - REGIONAL

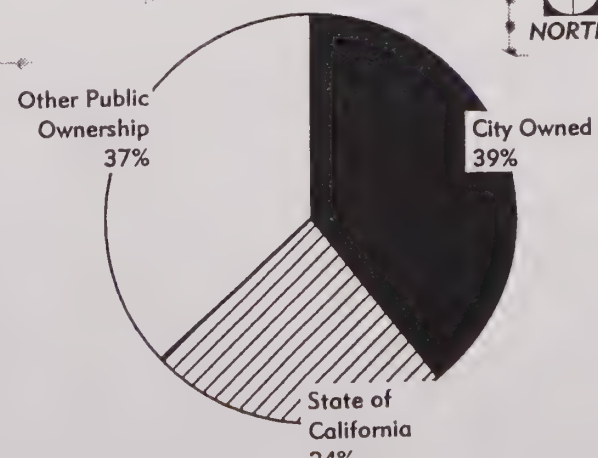
- CITY LIMITS
- SPHERE OF INFLUENCE
- AREA OF INTEREST



Map 6

Public Facilities
and Schools

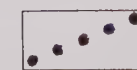
Source: City of Coalinga,
Planning Department, 1994



CITY LIMITS



SPHERE OF INFLUENCE



AREA OF INTEREST

REDEVELOPMENT AGENCY
OWNED PROPERTIES (24 ac)

CITY OWNED PROPERTIES (1,080 ac)



FRESNO COUNTY (3 ac)



STATE OF CALIFORNIA (649 ac)

COALINGA-HURON
UNIFIED SCHOOL DISTRICT (96 ac)

WEST HILLS COMMUNITY COLLEGE (182 ac)



MID-VALLEY FIRE PROTECTION DISTRICT (7 ac)



COALINGA HOSPITAL DISTRICT (29 ac)

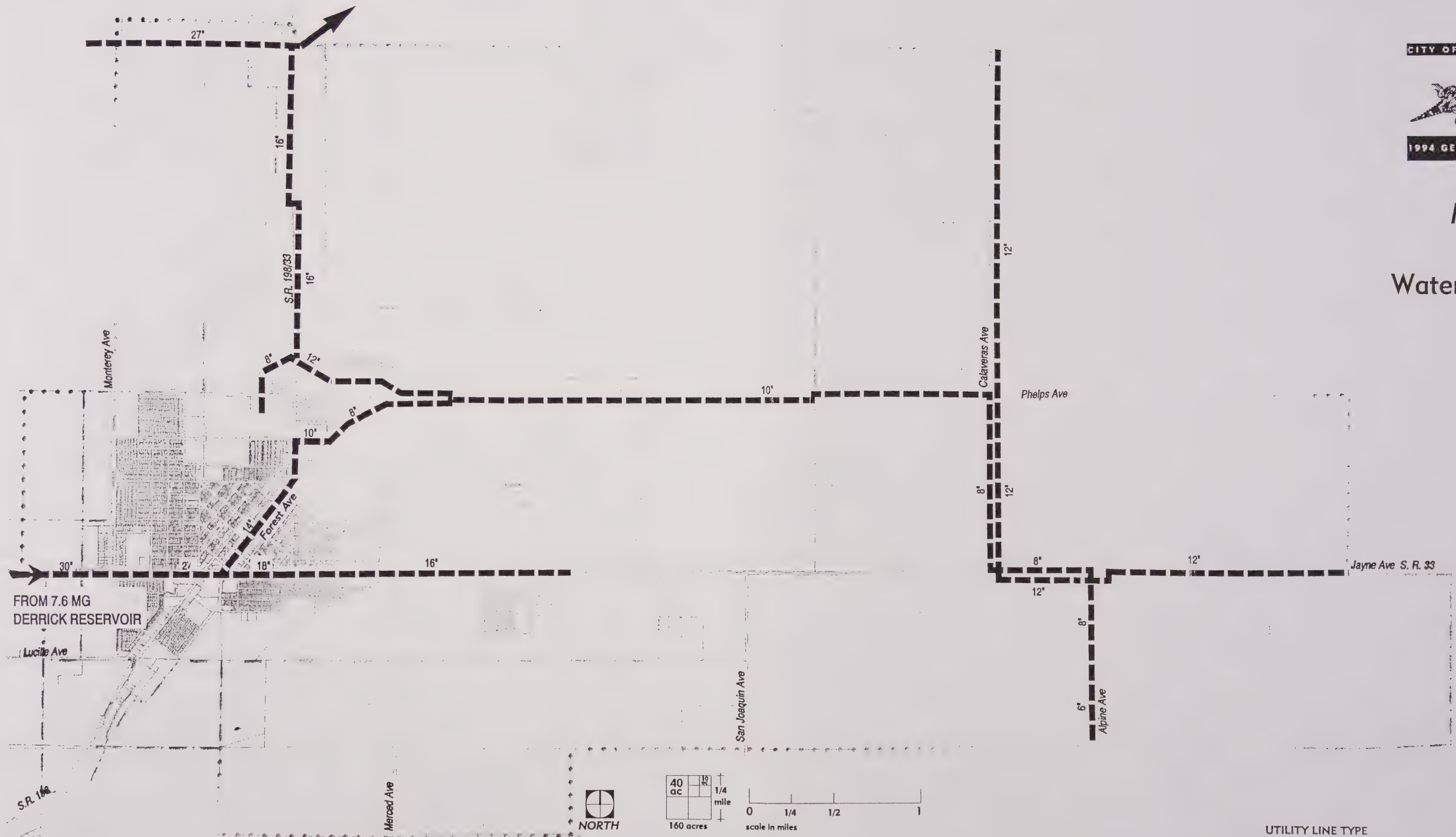
COALINGA-HURON RECREATION
AND PARKS DISTRICT (18 ac)COALINGA-HURON
CEMETARY DISTRICT (8 ac)

Note: See Part III Sections B,
Public Service, and C-2,
Utilities for a discussion of
police, fire, school and utility
services.



Map 7

Water Lines



40
ac
160 acres

1/4
mile
scale in miles



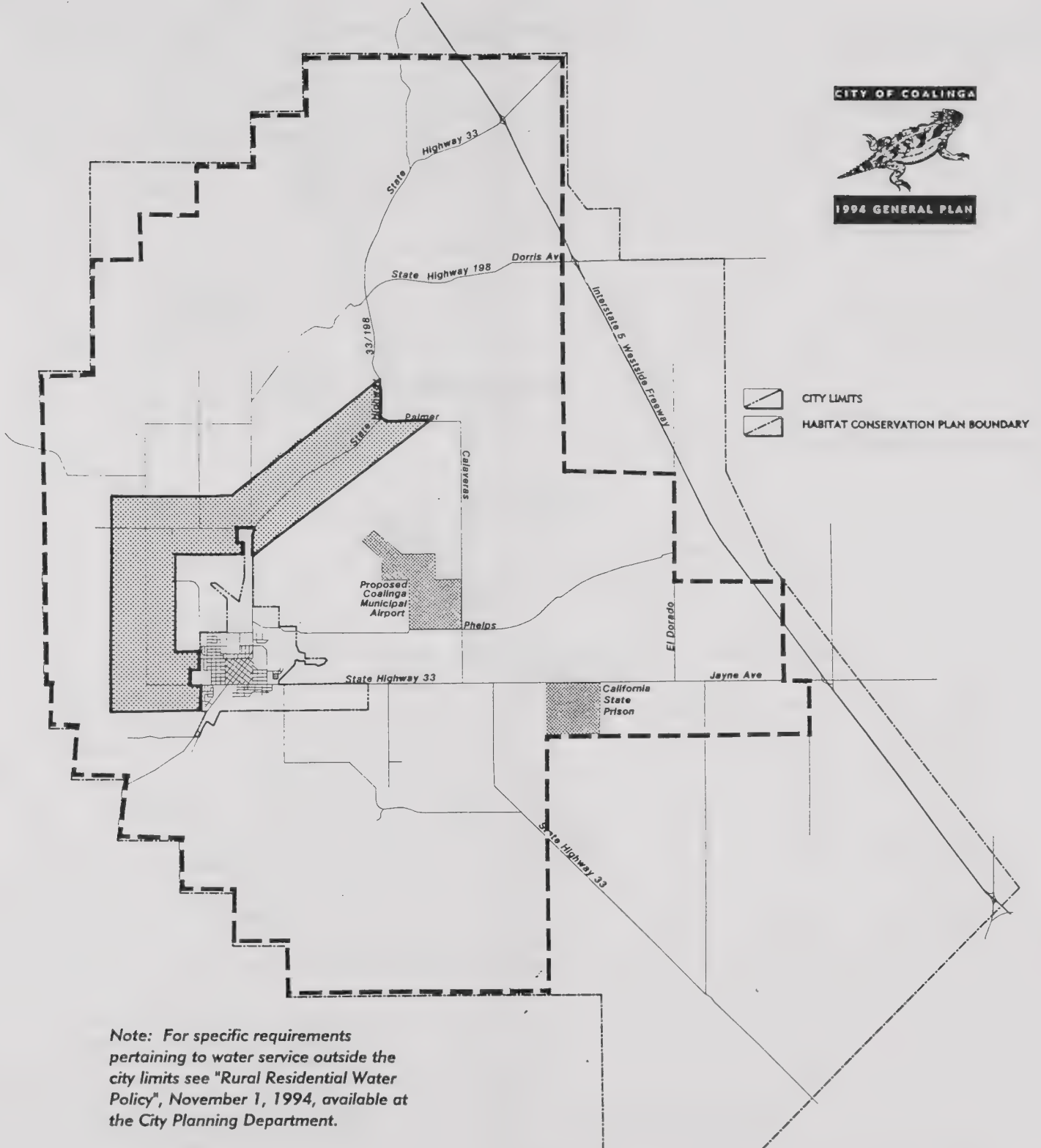
CITY LIMITS



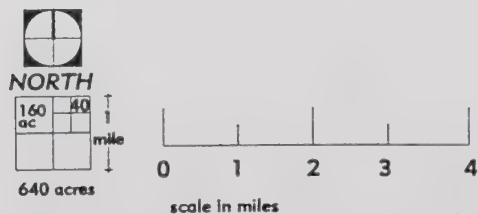
SPHERE OF INFLUENCE



AREA OF INTEREST



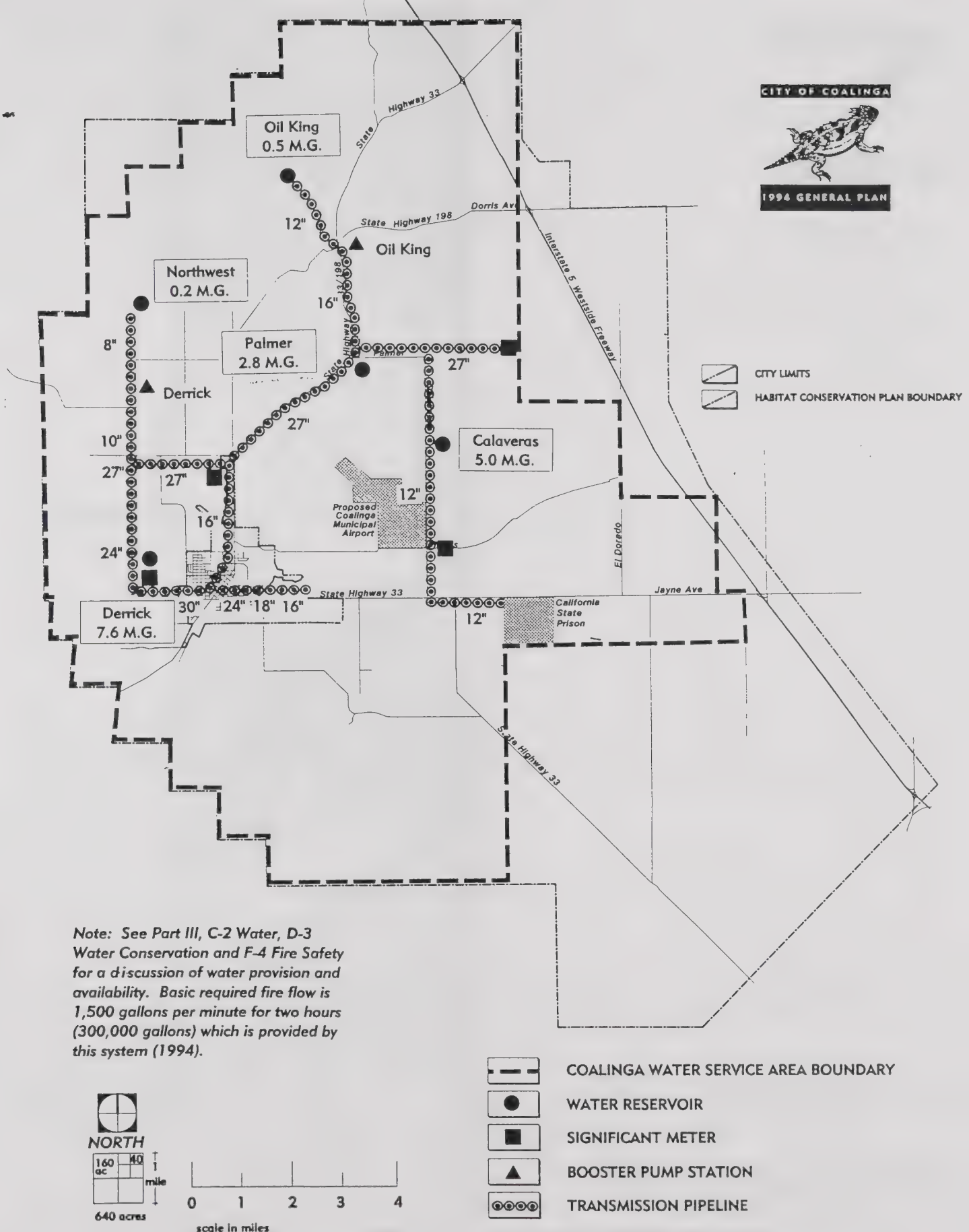
Note: For specific requirements pertaining to water service outside the city limits see "Rural Residential Water Policy", November 1, 1994, available at the City Planning Department.



- COALINGA RURAL WATER SERVICE AREA BOUNDARY
- RURAL RESIDENTIAL WATER SERVICE BOUNDARY (3000 feet from the centerline of designated streets/highways)

Source: City of Coalinga,
Planning Department, 1994

Map 8 Rural Water Service Area

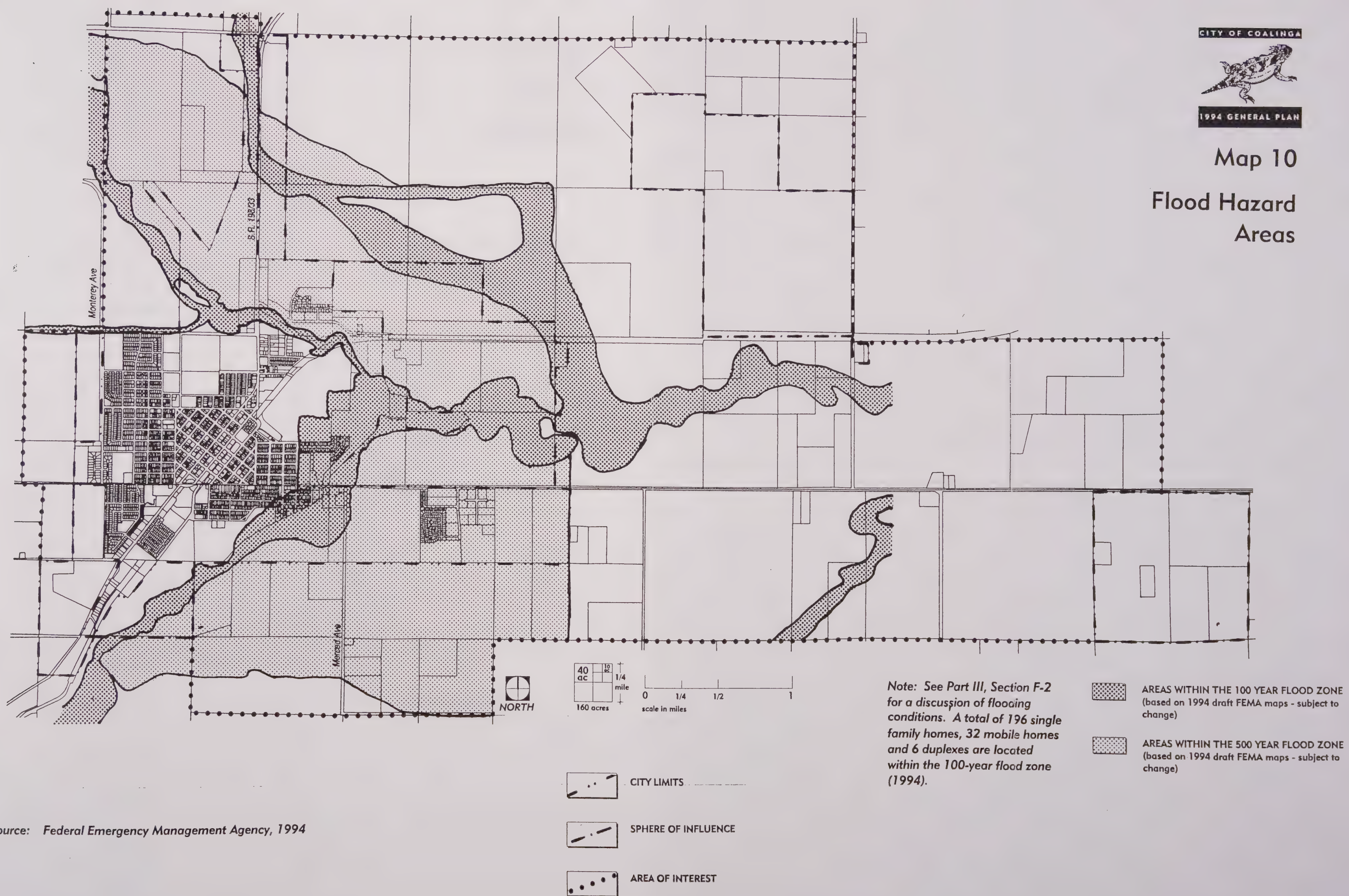


Source: City of Coalinga,
Planning Department, 1994.

Map 9 Water Storage and Significant Metering



Map 10

Flood Hazard
Areas



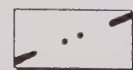
Map 11

Mineral Resources
and Agricultural Areas

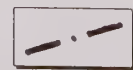
Source: USGS 7.5 min. Coalinga Quadrangle, 1979;
California Division of Oil and Gas, 1982;
Fresno County Assessors Data, 1994;
City of Coalinga, Planning Department, 1994.

40
ac 10
ac 1/4
mile
160 acres

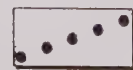
0 1/4 1/2 1
scale in miles



CITY LIMITS



SPHERE OF INFLUENCE



AREA OF INTEREST

Note: See Part III, D-2 Mineral
Resources, and D-6
Agricultural Lands for a
discussion of these factors.

Note: the State Division of
Mines and Geology has not
designated any mineral
resources within the Coalinga
planning areas (1994).

USE CLASSIFICATION



COALINGA OIL FIELD (portion)

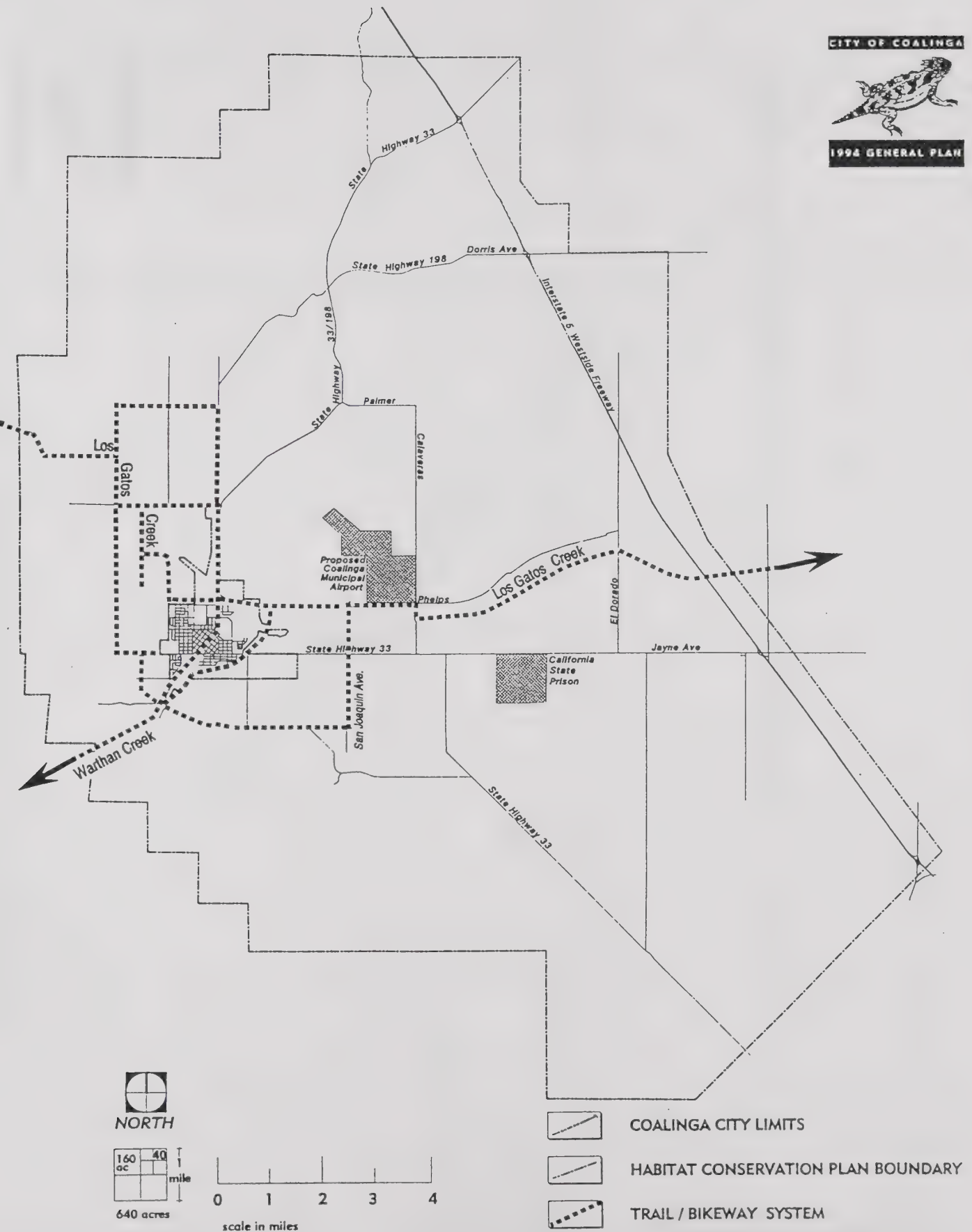


GRAVEL EXTRACTION



FIELD CROPS





AGRICULTURAL CONSERVATION
CONTRACTS (WILLIAMSON ACT)

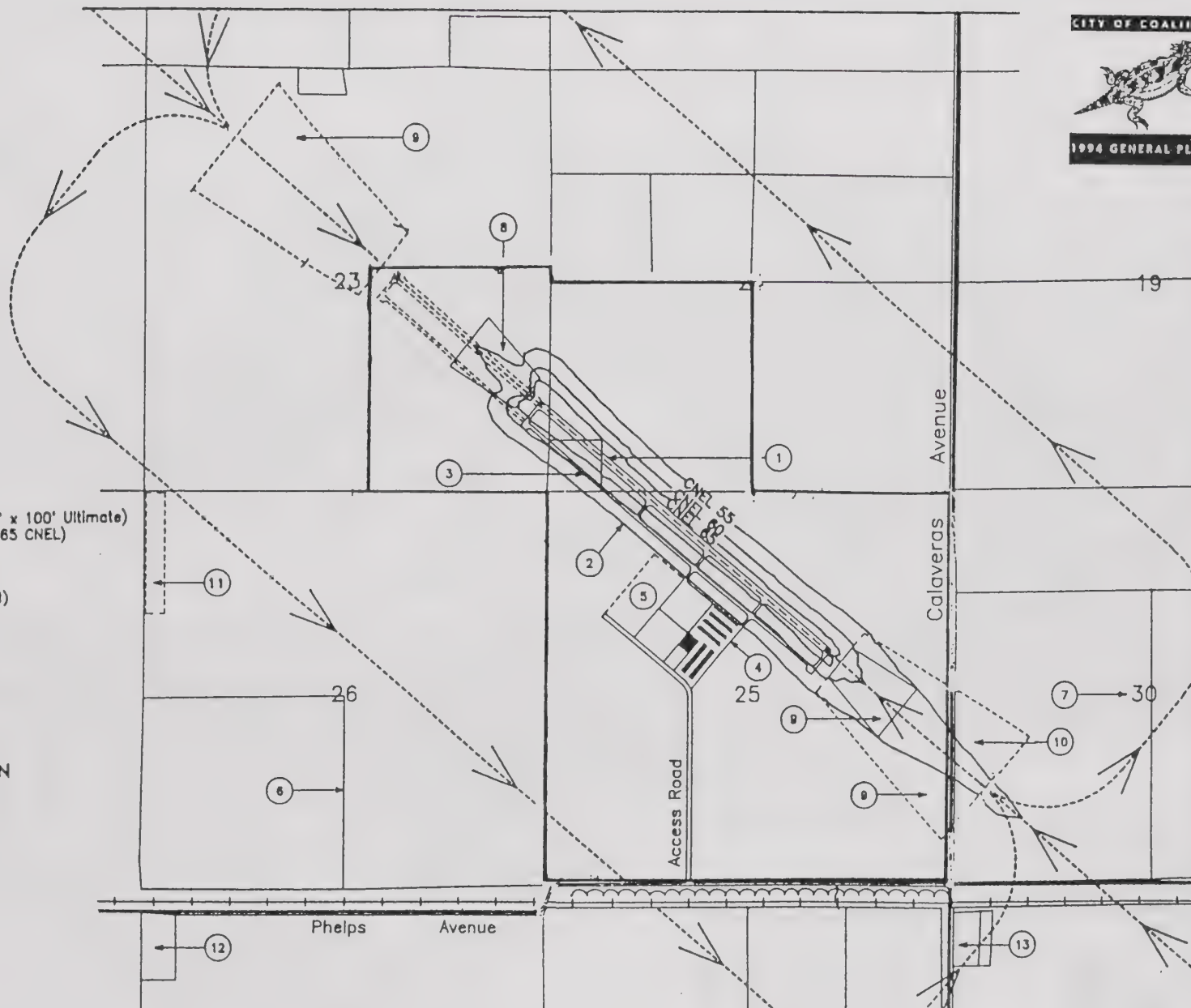


Map 12 Regional Trail System and Bikeway



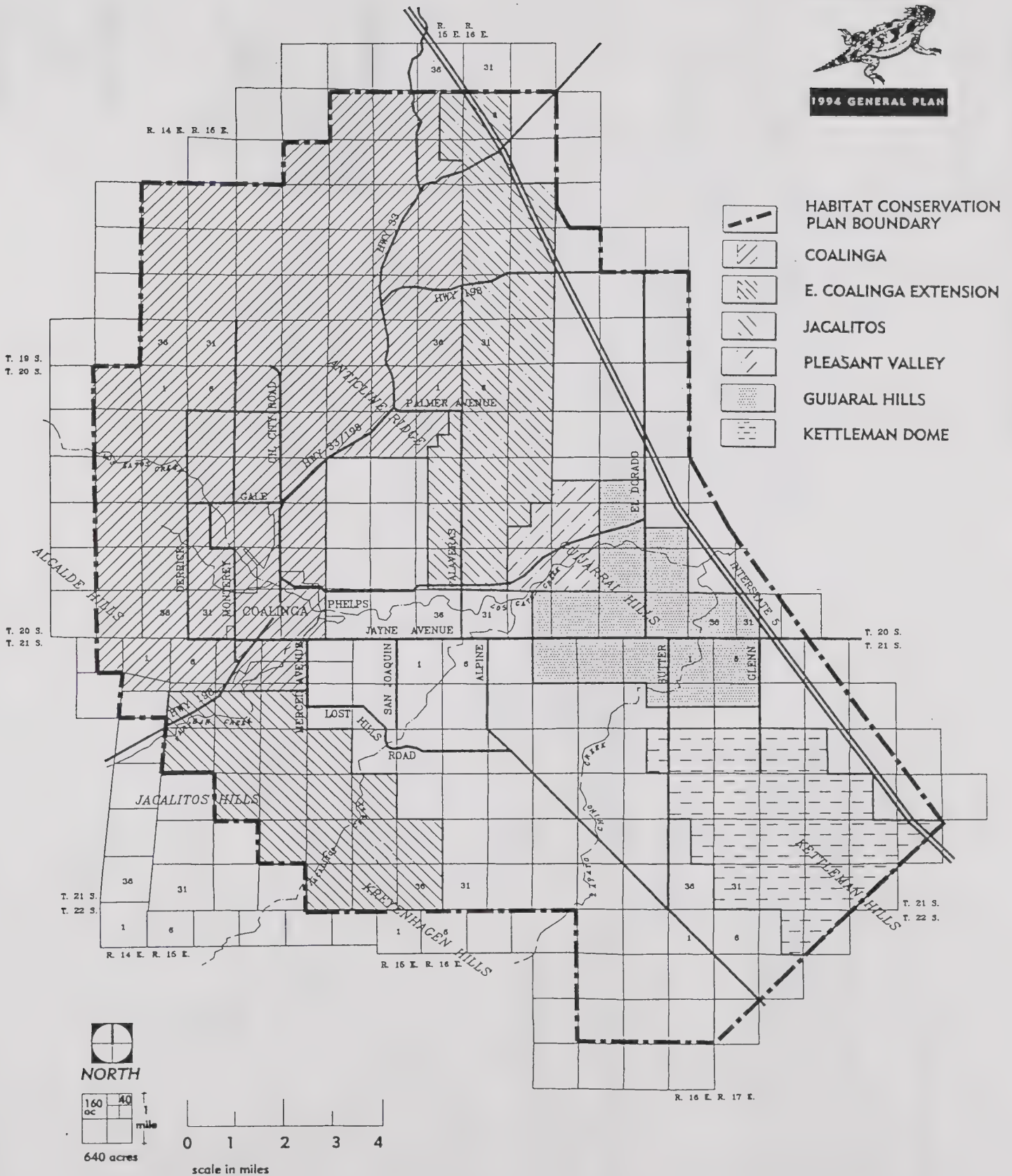
- 1 = 5,000' x 100' Runway (7,500' x 100' Ultimate)
- 2 = Noise Contours (55, 60, and 65 CNEL)
- 3 = Parallel Taxiway
- 4 = FBO / Basing Area (Initial)
- 5 = FBO / Basing Area (Ultimate)
- 6 = Private Property Lines (typical)
- 7 = Section Number (typical)
- 8 = Initial Clear Zone
- 9 = Ultimate Clear Zone
- 10 = Avigation Easement
- 11 = Residences / Farm Buildings
- 12 = Residence
- 13 = Cemetery

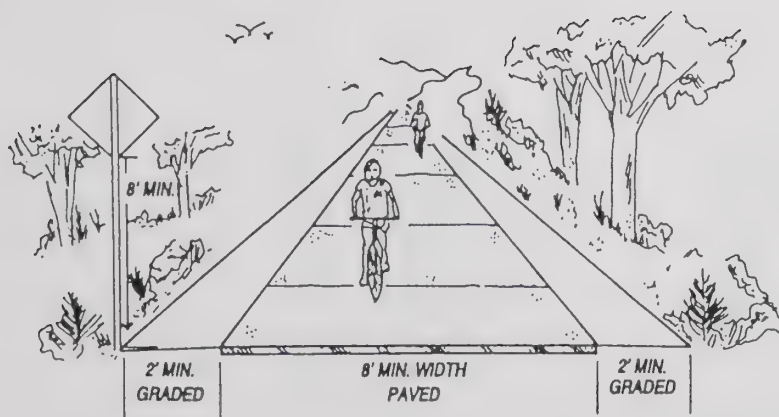
-  LAND ACQUISITION
-  FLIGHT TRACK
-  ABANDONED RR
-  TREES



Source: Cortright & Seibold, Airport/Aviation Consultants, 1994.

Map 13
New Coalinga Airport - Noise Contours (CNEL)

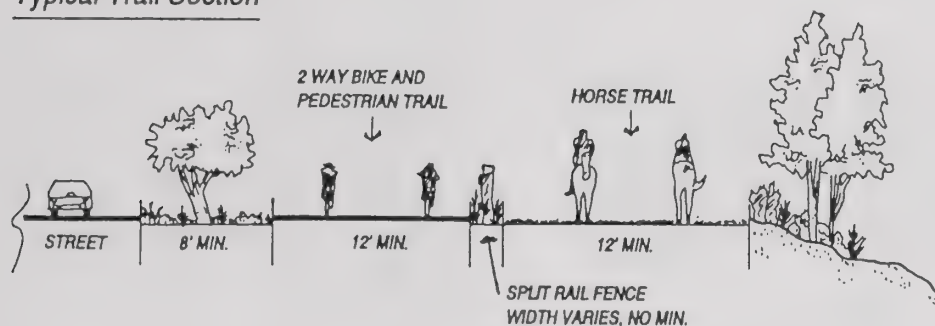




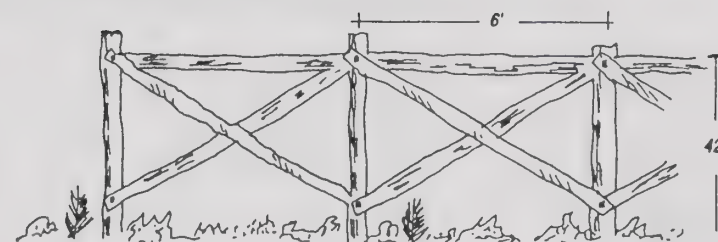
Trail Sign



Typical Trail Section



Split Rail Fence



Note: Because paths and trails will loosely follow the creek systems through the area they could result in significant effects to both riparian and upland habitat areas. In order to avoid wildlife impacts, trails need to be placed outside of the riparian zone, and outside the adjacent upland habitat buffer of 100 feet. This buffer should be revegetated to native saltbrush scrub habitat for endangered species. All bike/trail development, including landscaping, must not impact the buffer area.

Source: Cotton / Beland / Associates, Inc.

Standards 1 Bike Paths / Trail Standards



Land Use Category	Community Noise Equivalent Level (CNEL) or Day-Night Level (Ldn), dB						
	55	60	65	70	75	80	85
Residential- Low-Density Single-Family, Duplex, Mobile Homes							
Residential- Multiple Family							
Transient Lodging - Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business, Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Nature of the noise environment where the CNEL or Ldn level is:

Below 55 dB

Relatively quiet suburban or urban areas, no arterial streets within 1 block, no freeways within 1/4 mile.

55-65 dB

Most somewhat noisy urban areas, near but not directly adjacent to high volumes of traffic.

65-75 dB

Very noisy urban areas near arterials, freeways or airports.

75+ dB


Extremely noisy urban areas adjacent to freeways or under airport traffic patterns. Hearing damage with constant exposure outdoors.

 Normally Acceptable


Specified land use is satisfactory, based on the assumption that any buildings are of normal conventional construction, without any special noise insulation requirements

 Conditionally Acceptable

New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

 Normally Unacceptable

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.

 Clearly Unacceptable

New construction or development should generally not be undertaken.

The Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (Ldn) are measures of the 24-hour noise environment. They represent the constant A-weighted noise level that would be measured if all the sound energy received over the day were averaged. In order to account for the greater sensitivity of people to noise at night, the CNEL weighting includes a 5-decibel penalty on noise between 7:00 p.m. and 10:00 p.m. and a 10-decibel penalty on noise between 10:00 p.m. and 7:00 a.m. of the next day. The Ldn includes only the 10-decibel weighting for late-night noise events. For practical purposes, the two measures are equivalent for typical urban noise environments.

Source: Cotton/Beland/Associates, adapted from City of Los Angeles EIR Manual for Private Projects, U.S. Department of Housing and Urban Development and State of California Guidelines and U.S. EPA, *Report on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety*, 1974.

PART II: SPECIAL PLAN DOCUMENTS

COALINGA GENERAL PLAN

City of Coalinga

November, 1994

Consultants to the City:

CBA
747 East Green Street Suite 400
Pasadena, California 91101

PART II SPECIAL PLAN DOCUMENTS

1. Air Quality Element
2. Airport Land Use Plan
3. Housing Element
4. Habitat Conservation Plan (HCP) Summary

AIR QUALITY ELEMENT

INTRODUCTION

The State of California has not yet required an Air Quality Element as part of a general plan. However, the San Joaquin Valley Unified Air Pollution Control District ("District"), whose jurisdiction includes eight counties including Fresno County, encourages all cities in the District to include air quality elements in their general plans. The preparation and implementation of these elements will help the San Joaquin Valley Air Basin (SJVAB) achieve the goals defined in the following plans: (1) the 1991 Air Quality Attainment Plan (AQAP) adopted on January 30, 1992, by the District Governing Board; (2) the 1991 PM10 Nonattainment Area Plan, under revision as of March 1994; and (3) the carbon monoxide State Implementation Plan (SIP) for Fresno County, submitted to the California Air Resources Board (ARB) in November 1992.

The Coalinga Air Quality Element is intended to help the City as well as the basin improve its air quality to meet state and federal air quality requirements.

What the Air Quality Element Contains

To help cities prepare air quality elements, the District has prepared a Model Air Quality Element, which includes background research, goals, policies, and analysis. Consistent with the model element, the City of Coalinga Air Quality Element:

- Specifies for which pollutants the community does not meet State and federal air quality standards;
- Discusses the indirect, transportation, and areawide control measures of both the State and federal Clean Air Act plans as they relate to the community;
- Contains goals that assist the District in attaining air quality standards of the California Clean Air Act; and
- Contains specific policies that lead to achievement of those goals.

BACKGROUND

Existing Air Quality

Air pollution in the San Joaquin Valley Air Basin results from human activities that cause emissions, coupled with natural phenomenon that stimulate the formation of unhealthy air. The San Joaquin Valley is surrounded by mountains on the west, east, and south. Additionally, the valley experiences long, sunny summers and relatively short, foggy winters. These features contribute to local climate episodes such as frequent temperature inversions (i.e., when the temperature increases with altitude).

The human causes of air pollution in the valley are population growth, urbanization, mobile sources (cars and trucks), oil production, and agriculture. The most significant factors accelerating air quality decline in the SJVAB are rapid population growth and its associated increases in traffic, urbanization, and industrial activity. Oil production has been declining since 1985, and this has resulted in a decrease in emissions from that industry.

Wind and weather patterns over a region do not change significantly over the years. This part of the air pollution problem is a given, and the residents of Coalinga cannot hope, for example, that long-term wind patterns will change and solve the problem. However, the City and its residents can change the development and circulation patterns in ways that will improve air quality. The following section discusses the current San Joaquin Valley environment, including Coalinga, as it relates to air quality.

Geography and Topography

The California Air Resources Board (ARB) has divided the state into regional air basins according to topographic air drainage features. The Basin is the second largest air basin in the state. It is defined by the Sierra Nevada in the east (8,000 to 14,000 feet in elevation), the Coastal Ranges in the west (4,500 feet in elevation), and the Tehachapi mountains in the south (9,000 feet in elevation). The San Joaquin Valley could be considered a "bowl" open only to the north.

Although marine air generally flows into the basin from the San Joaquin River Delta, the region's topographic features restrict air movement through and out of the basin. The Coastal Ranges hinder wind access into the valley from the west, the Tehachapis prevent southerly passage of air flow, and the high Sierra Nevada range is a significant barrier to the east. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet). These topographic features result in weak air flow which becomes blocked vertically by high barometric pressure over the valley. So, the Basin is highly susceptible to air pollution accumulation.

Climate

Local climate can exacerbate the air quality problem. Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind can help create or help break up air pollution. For example, ozone is classified as a "regional" pollutant in part due to the time required for ozone formation. Ozone precursors can be transported well away from the source area before ozone concentrations peak. Other primary pollutants (e.g., carbon monoxide) may form high concentrations when wind speed is low.

During the summer, wind usually originates at the northern end of the San Joaquin Valley and flows in a south-southeasterly direction through the valley, through Tehachapi pass, and into the Southeast Desert Air Basin portion of Kern County.

During the winter, wind occasionally originates from the southern end of the San Joaquin Valley and flows in a north-northwesterly direction. Also during the winter, the valley experiences light, variable winds of less than 10 miles per hour. Low wind speeds, combined with low inversion layers in winter, create a climate conducive to high carbon monoxide (CO) concentrations.

Wind speed and direction change throughout the day. During the day, north-northwesterly winds prevail. However, in the late evening through early morning, wind flow is affected by cooler drainage winds from the surrounding mountains, and the wind flow reverses direction. This interruption of northwesterly wind, including the evening and morning transition between the two windflow patterns, is known as an eddy. This phenomenon adds to the complexity of regional windflow and pollutant transport within the Basin.

The Basin has an "inland mediterranean" climate averaging over 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. The average mean temperature over a 30-year period is 65 degrees. High daily temperatures in summer average 95 degrees in the valley. The winter average daily low temperature is 45 degrees. Since 1960, the San Joaquin Valley averaged 106 days a year of 90 degrees or hotter, and 40 days a year of 100 degrees or hotter. The daily summer temperature variation can be as high as 30 degrees.

Temperature and solar radiation are important in the chemistry of ozone formation (a major component of smog). Ozone is formed in a photochemical reaction requiring sunlight. Generally, the higher the temperature, the more ozone formed. However, extremely hot temperatures can "lift" or "break" the inversion layer, dispersing the ozone.

Inversion Layers and Air Pollution

Inversion layers are formed in the atmosphere when temperature increases with elevation, or when a mass of warm, dry air settles over a mass of cooler air near the ground. Inversion layers are significant in determining both ozone formation and CO concentrations. Ozone and its precursors will mix and react to produce higher concentrations under an inversion, and inversions trap and hold directly emitted pollutants such as CO. In short, inversions and air pollution literally do not mix.

Meteorological data are used to assess the potential for air pollution accumulation. For example, weather factors that may restrict horizontal and vertical air movement are important. Vertical movement lifts the pollutants through a thicker layer of air, while horizontal movement spreads the pollutants over a wider geographic area. Temperature inversions, which occur in a stable atmosphere of warm air over cooler air, hinder the upward dispersion of pollutants. The Basin experiences two common types of inversions: radiation inversion and subsidence inversion.

Radiation inversions are caused by nighttime cooling of an air layer near the valley surface. It extends upward several hundred feet and occurs during the nighttime and early morning. During a radiation inversion, little vertical mixing occurs. The inversion is destroyed when the sun heats the ground, which in turn heats the lower layers of air. The ground-level air then floats up through the inversion layer. The inversions are more persistent during the winter, when they occur nearer to the valley floor.

Subsidence inversions are caused by downward vertical motion. As air descends, it warms and as a result becomes warmer than the air beneath it. This limits vertical mixing, which can only occur when the air below is warmer than the air above.

AIR QUALITY STANDARDS

Air pollutants negatively affect human health, plants, animals, and building materials. Some of these effects are temporary, and others are permanent. Table G-1 summarizes air pollution effects.

The Federal Clean Air Act (FCAA, 1970, amended 1977 and 1990) required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards for several air pollutants, based on human health and welfare criteria. Two types of standards have been established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction. Primary standards were established for the following "criteria" air pollutants, so called because they were established on the basis of health criteria:

- Carbon monoxide (CO);
- Ozone (O₃);
- Fine particulate matter (less than 10 microns in diameter)(PM₁₀);
- Nitrogen dioxide (NO₂);
- Sulfur dioxide (SO₂); and
- Lead (Pb).

The primary standards are intended to protect, with an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or people engaged in strenuous work or exercise.

Secondary standards have been established for carbon monoxide, ozone, fine particulate matter, nitrogen dioxide, and lead. Generally, the secondary standard is the same as the primary standard.

States are required to develop and implement air pollution control plans designed to achieve and maintain the standards established by the EPA. States may also develop their own standards, provided the state standards are at least as stringent as the EPA/federal standards. California has established California Ambient Air Quality Standards. The California standards are more stringent than the federal standards, especially for PM₁₀ and sulfur dioxide. Also, California has set individual standards for visibility, sulfates, hydrogen sulfide, and vinyl chloride. Table G-2 lists California and federal primary ambient air quality standards. Note that California has more and stricter standards.

Each air pollution control district in California is designated by the California Air Resources Board (ARB) as "attainment," "nonattainment," or "unclassified" for each of the 10 pollutants for which CAAQS have been established: PM₁₀, ozone, nitrogen dioxide, sulfur dioxide, CO, sulfates, lead, hydrogen sulfide, vinyl chloride, and visibility reducing particles. Attainment of the State standard is determined by a district's highest air monitor reading.

A "nonattainment" designation means the pollutant concentration in the district exceeded the State standard established for that pollutant at least once in the last three years. A district with a nonattainment status is required to develop plans for attaining and maintaining the standards for each nonattainment pollutant or its precursor. These plans are discussed in the next section, "Air Quality Plans."

An "attainment" designation means that the State standard for that pollutant has not been violated in the designated district. However, this does not mean that the district is exempt from air quality programs. To maintain the State standards, the district must adopt all rules and regulations necessary to protect ambient air quality.

**TABLE G-1
AIR POLLUTION EFFECTS**

POLLUTANT TYPE	DESCRIPTION	EFFECTS	SOURCES
Carbon Monoxide (CO)	Colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing substances.	Passes through lungs into bloodstream. Deprives sensitive tissue of oxygen. Not known to have adverse effects on vegetation, visibility, or material objects.	Gasoline-powered motor vehicles
Oxides of Nitrogen (NOx)	Two types, Nitric Oxide (NO), and Nitrogen Dioxide (NO ₂). NO is a colorless, odorless gas formed when combustion takes place under high pressure and/or temperature. NO ₂ forms by combustion of NO and oxygen. Participants in photochemical smog reactions.	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles primary source. Other sources: petroleum refining operations, industrial sources, ships, railroads, aircraft.
Sulfur Oxides (SOx)	Colorless, pungent gas formed by combustion of sulfur-containing fossil fuels.	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion primary source. Other sources: chemical plants, sulfur recovery plants, and metal processing.
Photochemical Oxidant	Consists primarily of ozone. Created in atmosphere, not emitted directly, during photochemical process. Ozone is a pungent, colorless toxic gas.	Common effects are damage to vegetation and cracking of untreated rubber. High concentrations can directly affect lungs, causing irritation.	Motor vehicles major source of emission of oxidants of nitrogen and reactive hydrocarbons, which are ozone precursors.
Particulates	Made up of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists.	May irritate eyes and respiratory tract. Absorbs sunlight, reducing amount of solar energy reaching the earth. Produces haze and limits visibility. Can damage materials.	Dust- and fume-producing industrial and agricultural operations, construction, combustion products including exhaust, atmospheric photochemical reactions. Natural activities such as wind-raised dust and ocean spray.
Hydrocarbons and Other Organic Gases	Includes the many compounds consisting of hydrogen and carbon, found especially in fossil fuels. Some highly photochemically reactive.	Not known to cause adverse effects in humans. May damage plants.	Motor vehicles major source. Other sources: petroleum refining, petroleum marketing operations, and evaporation of organic solvents.

SOURCE: South Coast Air Quality Management District, "Air Quality Handbook for Preparing Environmental Impact Reports", April 1987.

TABLE G-2
AMBIENT AIR QUALITY STANDARDS

AIR POLLUTANT	CALIFORNIA STANDARD	FEDERAL PRIMARY STANDARD
Ozone (O ₃)	0.09 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.
Carbon Monoxide (CO)	9 ppm, 8-hr. avg. 20 ppm, 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.
Nitrogen Dioxide (NO ₂)	0.25 ppm, 1-hr. avg.	0.053 ppm, annual avg.
Sulfur Dioxide (SO ₂)	0.05 ppm, 24-hr. avg. with ozone > 0.10 ppm, 1-hr. avg. or TSP > 100 ug/cu. m, 24-hr. avg.; 0.25 ppm, 1-hr. avg.	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.
Fine Particulate Matter (PM ₁₀)	30 ug/cu. m, annual geometric mean; 50 ug/cu. m, 24-hr. avg.	50 ug/cu. m, annual arithmetic mean; 150 ug/cu. m, 24-hr. avg.
Lead (Pb)	1.5 ug/cu. m, 30-day avg.	1.5 ug/cu. m, calendar quarter
Visibility Reducing Particles	In sufficient amount to reduce the visual range to less than 10 miles at relative humidity less than 70%, 8- hour average (9am-5pm)	None
Sulfates	25 ug/cu. m, 24-hr. avg.	None
Hydrogen Sulfide (H ₂ S)	0.03 ppm, 1-hr. avg.	None
Vinyl Chloride	0.10 ppm, 24-hr. avg.	None

SOURCE:

Model Air Quality Element, Final Public Draft, San Joaquin Valley Unified Air Pollution Control District, March 4, 1994.

CEQA Air Quality Handbook, South Coast Air Quality Management District, May 1993.

NOTES: ppm = parts per million by volume

TSP = total suspended particulates

ug/cu. m = micrograms per cubic meter

The ARB designates an area as "unclassified" if not enough data exist on which to base a decision on attainment or nonattainment. An unclassified status signals the need for additional data collection and analysis.

The ARB has designated the entire San Joaquin Valley a nonattainment area for the ambient ozone standard. The metropolitan areas of Fresno, Modesto, and Stockton are designated by the ARB as nonattainment for carbon monoxide (CO), with Bakersfield classified as a nonattainment "transitional" area because the area has exceeded the standard only once in the last four years. The requirements for this designation are the same as for a nonattainment area. The ARB is required to reevaluate designations annually.

Tables G-3 and G-4 show the number of exceedances of air quality standards for ozone and PM10 in the San Joaquin Valley Unified Air Pollution Control District for the years 1987 through 1992 (the most recent available data as of April 1994). The following pollutants either were in attainment or are currently unclassified: lead, hydrogen sulfide, nitrogen dioxide, sulfur dioxide, sulfates, vinyl chloride, and visibility reducing particles. Coalinga is in attainment for carbon monoxide. The tables depict a recent decline in the number of days that ozone pollution and PM10 has exceeded the standards.

The District has jurisdiction over air quality matters in the Basin. The District was formed in 1991. Its headquarters are located in Fresno, with regional offices located in Bakersfield and Modesto. Figure G-1 illustrates the Basin's boundaries and shows the air monitoring stations operating in 1994. Note that the eastern portion of Kern County falls outside the Basin. Eastern Kern County is within the Southeast Desert Air Basin.

Until the passage of the California Clean Air Act (CCAA), the District's primary role was the control of stationary pollution sources such as industrial processes and equipment. Now, the District, like all air districts, is required to implement transportation control measures and are encouraged to adopt indirect source control programs to reduce mobile source emissions. These mandates create the necessity for the District to work closely with cities, counties, and regional transportation planning agencies to develop new programs. The Coalinga Air Quality Element is intended to foster that necessary coordination.

For example, the District has entered into a memorandum of understanding with the transportation planning agencies of the eight counties in the air basin. This memorandum will help ensure a coordinated approach in developing and implementing transportation plans throughout the valley. Also, this action will help the regional transportation planning agencies comply with the federal and State clean air acts, as well as related transportation legislation such as the Intermodal Surface Transportation Efficiency Act (ISTEA).

TABLE G-3
NUMBER OF DAYS/OBSERVATIONS
STATE EMISSION STANDARDS WERE EXCEEDED
SAN JOAQUIN VALLEY AIR BASIN

YEAR	OZONE/1 MAXIMUM CONCENTRATION IN PPM		PM10 FINE PARTICULATES/2 MAXIMUM CONCENTRATION IN UG/M ³	
	1-Hour	Days*	24-Hours	Observ.*
1987	0.20	151	207	84
1988	0.19	154	244	68
1989	0.18	148	250	66
1990	0.17	130	439	79
1991	0.18	131	279	70
1992	0.16	124	183	66

* Number of days standard was exceeded. PM10 = number of observations, which averaged 100/yr. (range 88-110).

/1 State standard for ozone: 0.09 ppm₃, 1-hour avg. (0.10 in 1987)

/2 State standard for PM10: 50 ug/m³, 24-hour avg.

SOURCE: San Joaquin Valley Unified Air Pollution Control District, "Air Quality Data Summary," 1987-1992

TABLE G-4
NUMBER OF DAYS/OBSERVATIONS
FEDERAL EMISSION STANDARDS WERE EXCEEDED
SAN JOAQUIN VALLEY AIR BASIN

YEAR	OZONE/1 MAXIMUM CONCENTRATION IN PPM		PM10 FINE PARTICULATES/2 MAXIMUM CONCENTRATION IN UG/M ³	
	1-Hour	Days*	24-Hours	Observ.*
1987	0.20	64	207	4
1988	0.19	73	244	10
1989	0.18	54	250	9
1990	0.17	45	439	14
1991	0.18	51	279	9
1992	0.16	29	183	1

* Number of days standard was exceeded. PM10 = number of observations, which averaged 100/yr. (range 88-110).

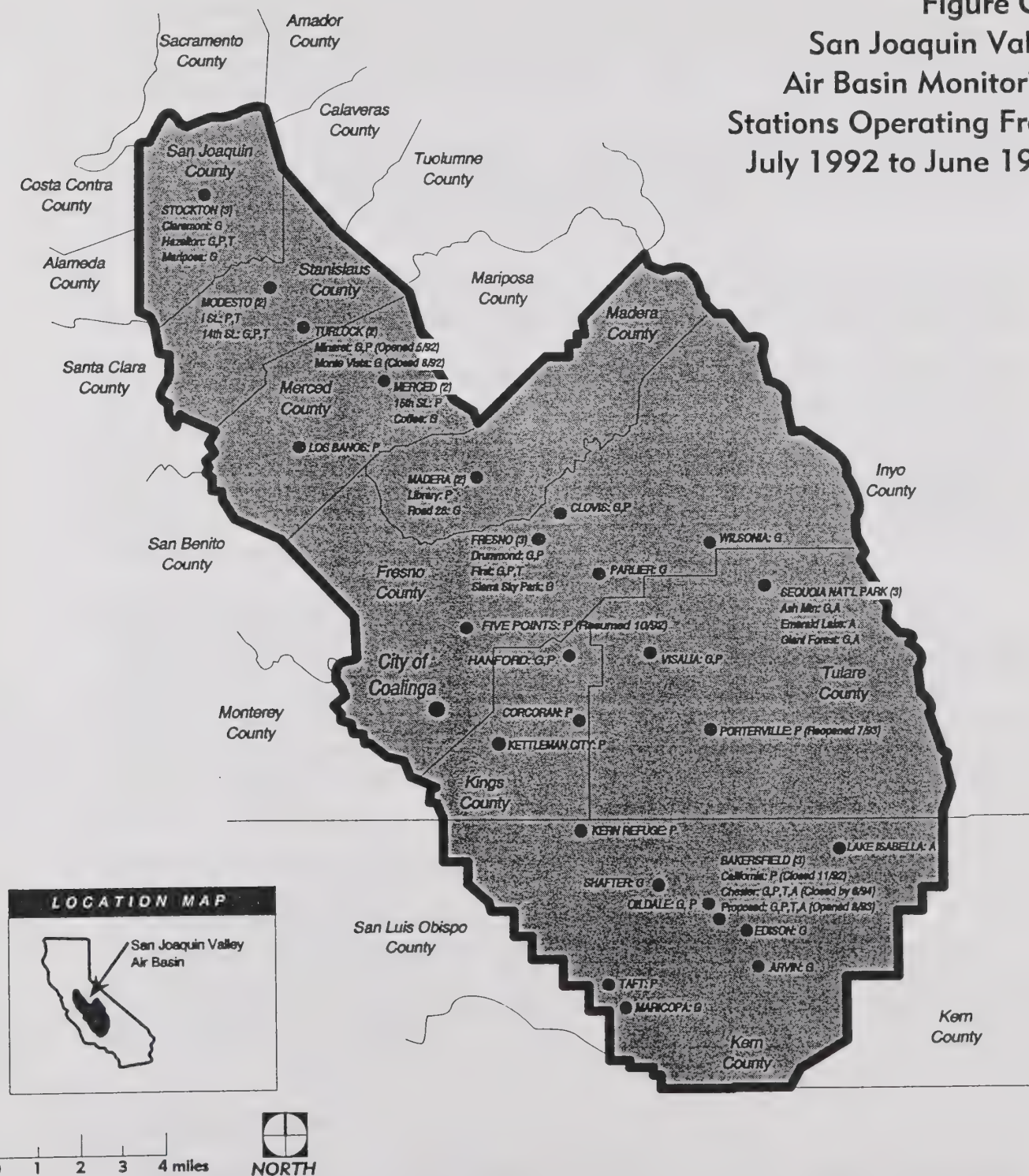
/1 Federal standard for ozone: 0.12 ppm₃, 1-hour avg.

/2 Federal standard for PM10: 150 ug/m³, 24-hour avg.

SOURCE: San Joaquin Valley Unified Air Pollution Control District, "Air Quality Data Summary," 1987-1992



Figure G-1
San Joaquin Valley
Air Basin Monitoring
Stations Operating From
July 1992 to June 1994



Source:

G GASEOUS MONITORING
 P PARTICULATE MONITORING
 T TOXICS SAMPLING
 A ACID DEPOSITION SAMPLING

AIR QUALITY PLANS

The purpose of the District Air Quality Attainment Plan (AQAP) is to bring the Basin into compliance with the California Air Resources Board Ambient Air Quality Standards for ozone and carbon monoxide by the earliest practicable date. The AQAP has been prepared to satisfy the California Clean Air Act (CCAA) requirements and the corresponding amendments to the California Health and Safety Code.

Because the CCAA does not mandate addressing pollution from fine particulate matter (PM₁₀), a separate PM₁₀ Nonattainment Area Plan was prepared by the District in 1991 to meet federal requirements. A draft was published on March 24, 1994.

A separate carbon monoxide State Implementation Plan (SIP) for Fresno County was submitted to the California Air Resources Board (ARB) in November 1992.

The above three documents provide the framework for air quality planning in the San Joaquin Valley and lay out the District's strategy to reduce emissions of nonattainment pollutants (ozone, carbon monoxide, PM₁₀). Nonattainment pollutants are those whose concentrations exceed State standards. In August 1992, the ARB reviewed and approved several portions of the 1991 AQAP. The ARB postponed a decision on the plan's ozone strategies until more information could be collected.

Both the AQAP carbon monoxide attainment strategies and the PM₁₀ Nonattainment Area Plan strategies have been incorporated into the SIP for California. The SIP contains the strategies and control measures that California will use to attain the National Ambient Air Quality Standards (NAAQS) established by the Environmental Protection Agency (EPA). However, because the District was redesignated as a "serious" nonattainment area for PM₁₀, the District prepared a draft Serious Area PM₁₀ Nonattainment Plan (published on March 24, 1994).

Air districts continuously monitor their progress in implementing attainment plans and must periodically report to the ARB and EPA. The districts also periodically revise the attainment plans to reflect new conditions and requirements in accordance with schedules mandated by the CCAA and the Federal Clean Air Act (FCAA). The goals and policies of the Coalinga Air Quality Element are designed to maintain consistency with potential revisions to State and federal mandates.

Nonattainment Areas

The entire SJVAB is a nonattainment area for ozone (O₃) and fine particulate matter (PM₁₀). The metropolitan areas of Fresno, Modesto, and

Stockton are nonattainment areas for carbon monoxide (CO); Bakersfield has been designated "nonattainment transitional" for CO, which carries the same requirements as a nonattainment designation. The "nonattainment" designation means that the pollution concentration in the area exceeded the State standard established for that pollutant at least once in the last three years.

The ARB requires a district with a nonattainment designation to develop plans for attaining and maintaining the standards for each nonattainment pollutant. The District Air Quality Attainment Plan, PM10 Nonattainment Area Plan, and SIP for Fresno County are intended to meet these ARB requirements.

Because the District cannot predict attainment and maintenance of the State ozone or CO standards until after December 31, 1997, the pollution problem in the basin is classified as "severe." As a severe nonattainment area, the San Joaquin Valley is subject to the most stringent requirements in the California Clean Air Act and must apply all feasible measures to reduce emissions. The ARB has determined that the San Joaquin Valley is both a receptor and contributor of transported air pollutants. The Basin has been identified by the ARB as a receptor of air pollution from the San Francisco Bay Area and Broader Sacramento air basins, and as a contributor of air pollution to the Broader Sacramento, Southeast Desert, and Great Basin Valley air basins. Since the SJVAB has been identified as a source of air pollution to other areas, additional mitigation requirements are mandated by the CCAA. The key CCAA requirements for the District include:

- Provide for five percent per year reductions in nonattainment emissions, or include "every feasible measure" in the AQAP;
- Establish a permitting program that achieves no net increase in stationary source emissions;
- Develop a strategy to reduce vehicle trips, use, and miles traveled;
- Increase average vehicle ridership to 1.5 persons per vehicle during commute hours by January 1, 1999;
- Reduce population exposure to nonattainment pollutants by 25 percent by December 31, 1994;
- Establish Best Available Retrofit Control Technology (BARCT) requirements for all permitted sources, with BARCT rules adopted for at least 75 percent of the permitted inventory by December 31, 1993; and
- Develop indirect and area source programs.

District Rules, Regulations, and Programs

The District implements air quality plans primarily by adopting rules and regulations. The California Health and Safety Code authorizes districts to adopt rules and regulations and to pursue civil and criminal penalties for violations. The law allows for fines and civil penalties of up to \$50,000 per day and imprisonment in the county jail for up to one year. The District has adopted rules on sources ranging from architectural coatings (Rule 4601) to Orchard Heaters (Rule 4303) to Rubber Tire Manufacturing (Rule 4681). The District rulebook contains more than 130 rules, and more are scheduled for development over the next few years.

The District has adopted several rules applying to sources never before regulated in the valley. Rule 4901 - Residential Wood Burning Fireplaces and Wood Heaters, calls for voluntary curtailment of wood burning on "No Burn Days" and the prohibition of sale of non-EPA-certified wood heaters within the District's jurisdiction. Rule 4902 - Residential Water Heaters, adopted June 17, 1993, requires new residential water heaters sold in the San Joaquin Valley to meet lower NOx emission standards. The District's first mobile source rule, Commute Based Trip Reduction - Rule 9001, was adopted in January 1994.

The District has identified three strategies in the 1991 AQAP for reducing emissions generated by indirect sources. These strategies include enhanced District CEQA participation, implementation of a new and modified indirect source review program, and encouragement of all cities and counties in the valley to adopt an air quality element or air quality policies as part of their general plans. The District now actively reviews and comments on CEQA documents prepared by lead agencies and suggests mitigation measures to reduce air quality impacts.

Recently, the District has undertaken steps to comply with Assembly Bill (AB) 2061 (Polanco). This bill requires assessment of socioeconomic impacts of certain new and modified rules put forth by the District, plus a good faith effort to minimize adverse effects on industry and the public. Where appropriate, the District now examines its proposed activities for socioeconomic effects.

Legislation such as AB 1807 (Tanner, Air Toxics Act), AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act), AB 3205 (Toxic Emissions Near Schools), SB 1731 ("Hot Spots" Risk Reduction Mandates), and the Federal Clean Air Act Amendments (Title III) mandate the District to implement a comprehensive toxic air emission program. AB 2588 requires the District to develop a uniform approach to catalogue the emissions of 729 toxic substances in the valley.

The District has also adopted a number of voluntary air quality programs. Examples include a Smoking Vehicles Program and the District Air Quality Education Program. Although these programs are voluntary, they provide an important link to local government and the public. The Smoking Vehicles

Program started as a pilot program in San Joaquin County in Spring 1992 and has been expanded to cover the entire valley.

COALINGA'S RESPONSIBILITIES

The District includes eight counties and 59 incorporated cities. Most strategies for reducing air pollution emissions are most effectively implemented through local jurisdictions. For example, local government's responsibility for air quality increased significantly with the passage of the California Clean Air Act (CCAA) and the Federal Clean Air Act (FCAA). Both these pieces of legislation emphasize the need to reduce motor vehicle trips and vehicle miles traveled at the local level.

The City of Coalinga's responsibilities for air quality cover four areas:

1. land use planning;
2. reviewing and mitigating the environmental impacts of development projects;
3. developing and maintaining the transportation infrastructure in the community; and
4. implementing local air quality programs such as commute-based trip reduction and coordinated transit routes.

Each of these responsibilities is discussed below.

Land Use Planning

The City of Coalinga has the authority and responsibility to approve or not approve development projects. As part of its duties, the City implements the General Plan. The Air Quality Element is not a mandatory element, but it is encouraged as an optional element by the District 1991 Air Quality Attainment Plan (AQAP). Even though the Coalinga Air Quality Element is optional, it must be consistent with the other Coalinga General Plan elements.

To implement the General Plan, the City adopts standards for all facets of development. Most well-known of these standards is the zoning ordinance, which designates the type, location, and mix of uses; and controls features such as building height, setbacks from streets and lot lines, landscaping requirements, parking requirements, and more. The subdivision ordinance sets standards for street and lot designs, dedication requirements, and financing of public improvements. The building code provides standards for construction, including energy efficiency requirements, structural standards, electrical standards, plumbing standards, and related requirements. These ordinances and standards provide an effective means for implementing design- and facility-based air quality control measures, as identified later in the air quality goals and policies.

CEQA Review

The California Environmental Quality Act (CEQA) was enacted by the State legislature in 1970 and has been amended many times. CEQA applies to local government initiated plans, projects, and regulations, and to private projects requiring discretionary approval from a State or local agency. For example, for this Coalinga General Plan, an environmental impact report (EIR) was prepared. An EIR must inform governmental decision makers and the public about the potential significant environmental effects of proposed activities.

CEQA allows the City to not approve a project if necessary to avoid one or more significant effects on the environment. This authority compels developers to include measures in their projects to mitigate potentially significant environmental impacts. The City is required to consult with, and request comments from, agencies that exercise authority over resources which may be affected by a project. The District has authority over most air quality issues and has staff assigned to review the air quality impacts of development projects. The District analyzes the project and recommends mitigation measures to reduce air quality impacts. The City may choose to require or not require the measures suggested by the District. However, for EIRs, when the City does not agree with recommendations and objections raised by the District, the City must prepare a written response that provides detailed reasons why specific comments were not accepted.

Transportation Infrastructure

Planning and construction of transportation infrastructure is a highly cooperative effort involving local government, regional transportation planning agencies, the California Department of Transportation (Caltrans), the federal Department of Transportation, and others. The Federal Clean Air Act (FCAA) requires transportation plans to conform with the air quality goals of the State Implementation Plan (SIP). This means that states must assure that transportation programs do not undermine the attainment of air quality standards.

Local Air Quality Programs

The California Clean Air Act (CCAA) allows air districts to delegate the implementation of transportation control measures to any local agency as long as the following conditions are met:

1. the agency must submit an implementation plan to the district for approval;
2. the agency must adopt and implement measures at least as stringent as those in the district's plan; and
3. the district must adopt procedures for reviewing the local agency's performance in implementing the measures.

One transportation control measure recently adopted by the District is Commute-Based Trip Reduction Rule 9001. Employers with 100 or more employees are affected by the rule, which involves rideshare programs and other methods to assist employers in reducing trips.

A second area where the City of Coalinga (and all other local governments) has an important role is in low-emission vehicle programs. Programs to convert City vehicle fleets, including buses, to cleaner burning fuels have significant air quality benefits and can provide a model to private industry.

The following section (Air Quality Goals and Policies) defines how Coalinga will work to reduce air pollution.

AIR QUALITY GOALS AND POLICIES

Air quality policy can be summarized as follows:

- Air pollution affects both local and regional air quality. The City of Coalinga is committed to implementing and cooperating in air quality programs to benefit the City as well as the San Joaquin Valley.
- The Air Quality Element will be used in conjunction with the other General Plan elements to implement coordinated and consistent land use, circulation, housing, and air quality policies and programs.
- The City of Coalinga supports the objectives of the San Joaquin Valley Unified Air Pollution Control District and will work with the District in achieving shared goals.

A goal is a planned end result which requires work to achieve. In this section, each goal is followed by policies, which are the directions intended to achieve the goal. Goals are general statements which set the stage for decision making. Policies are specific instructions that decision makers, including project developers, must follow in order to be consistent with the Air Quality Element and, by definition, the entire General Plan. The air quality policies are especially specific because they have resulted from work undertaken by the District for its Model Air Quality Element. The model element is intended to provide a resource for communities' own air quality elements.

COMMUNICATION, COOPERATION, AND COORDINATION

Air pollution is a complex problem. All levels of government are responsible for solving some portion of the problem. Often the responsibilities of one level of government overlap with another. In order to develop effective programs and reduce pollution emissions, effective communication, cooperation, and coordination are vital.

GOAL 1: Ensure effective communication, cooperation, and coordination in developing and operating community and regional air quality programs.

Environmental Assessment

The environmental assessment process required under CEQA is by far the most important tool for local government to communicate with other agencies and the public on the air quality impacts of development within a community. Strong and consistent application of CEQA can make a significant difference in project-level air quality impacts. As of May 1994, the San Joaquin Valley Unified Air Pollution Control District was preparing air quality impact assessment guidelines and a mitigation quantification handbook, expected to be completed in 1994, to help local government assess and mitigate project-specific air quality impacts. In the interim, District emissions thresholds are 54 pounds per day of ozone precursors and, excluding construction, 82 pounds per day of PM10. In general, as estimated by the District, the ozone threshold will be exceeded by a project comprised of about 350 residential units, depending on variables such as proximity to employment and commercial areas.

Policy 1-1: Require an air quality impact analysis using the methods promulgated by the District for all projects that are subject to CEQA review and which meet or exceed District emissions thresholds. When the methods and thresholds are adopted by the District, the City of Coalinga will review and implement them as appropriate for specific projects.

Policy 1-2: Ensure that air quality impacts identified during CEQA review are consistently and fairly mitigated.

Policy 1-3: Require all air quality mitigation measures to be feasible and implementable.

Policy 1-4: Identify the cumulative transportation and air quality impacts of all General Plan amendments approved during the previous year.

Policy 1-5: Analyze air quality impacts in accordance with the air basin-wide air quality impact assessment guidelines. When the District adopts these guidelines, the City of Coalinga will review and implement them as appropriate for specific projects.

Policy 1-6: Reduce the air quality impacts of development projects which may be insignificant in themselves but which are cumulatively significant.

Policy 1-7: Encourage developers to propose innovative measures to reduce air quality impacts, such as bike path and trail systems to facilitate non-vehicular transportation.

Coordination and Cooperation

We seldom achieve effective coordination and cooperation in government programs. Competitive and adversarial relationships common between many cities and with outside agencies have proven unproductive. Working together for a common interest can multiply the resources available to accomplish air quality goals.

Policy 1-8: Consult with the District during CEQA review for all discretionary projects meeting or exceeding District size thresholds and not previously reviewed by the District. While thresholds are being finalized by the District (May 1994), interim thresholds are 54 pounds per day of ozone precursors and, excluding construction, 82 pounds per day of PM10.

Policy 1-9: Coordinate with other jurisdictions in the San Joaquin Valley to establish parallel air quality programs and implementation measures.

Policy 1-10: Notify and request comments from neighboring jurisdictions and affected agencies during review of any General Plan amendment and other significant discretionary projects.

Integrated Planning

In the past, transportation planning emphasized the construction of new roadway capacity to reduce congestion and to meet the needs of planned development. Air quality legislation now mandates all transportation plans to consider air quality. This new emphasis requires land use and transportation plans to create patterns of development and transportation infrastructure which reduce the need for new capacity and improve air quality.

Understanding the impact of development decisions on air quality and other environmental and financial concerns is becoming increasingly difficult. Geographic information systems (GIS) can allow planners and decision makers to more easily visualize and understand the complex interactions created when land uses and circulation are changed.

Policy 1-11: Use the General Plan Land Use, Infrastructure (Circulation), and Air Quality elements and policies as the basis for the transportation infrastructure required for the mobility of future residents.

Policy 1-12: Work closely with the Coalinga-Huron Unified School District to identify future school sites that are compatible with land use, transportation, and air quality plans.

Policy 1-13: Support the investment in cost-effective modeling and geographic information system (GIS) technology.

Education

Without the understanding and support of the general public, local air quality programs cannot be expected to achieve the desired results. Programs to educate the public on air quality issues are a vital component of a successful air quality program.

Policy 1-14: Support and participate in the air quality education programs of the District.

Public Facilities and Operations

Local government should take a leadership role in reducing the emissions from its own vehicle fleet as a model for the private sector. The City was on a natural gas vehicle system between 1972 and 1982, but compressor costs were prohibitive and the program had to be eliminated. The City began using some electric vehicles in 1994.

Policy 1-15: Continue to replace or convert City conventional fuel vehicles with clean fuel vehicles as feasible.

LAND USE, TRANSPORTATION, AND AIR QUALITY

Motor vehicle use is a major cause of exceedances of State and federal ozone and carbon monoxide standards in the San Joaquin Valley. The land use pattern and transportation system developed over the last 50 years has led to ever increasing vehicle trips and vehicle miles traveled. New ways of developing the land and meeting our mobility needs are necessary to reverse this trend and to improve our air quality.

GOAL 2: Reduce motor vehicle trips and vehicle miles traveled, and increase average vehicle ridership (AVR).

Land Use Pattern

The Coalinga downtown core has developed as a compact, mixed-use, pedestrian-friendly environment. Future growth outside downtown should use this core as a basic model for development, combined with new ideas for improving land use patterns, circulation, and air quality.

Future growth in Coalinga should not follow the development patterns typical in many San Joaquin Valley communities. In general, these development patterns are not conducive to walking, cycling, and transit use. Many office developments have low employment densities and are often isolated from commercial services, forcing people to drive to eat lunch or to complete errands. High-density residential projects often have little if any commercial development nearby or discourage pedestrian access to commercial uses with block walls and large parking lots. The most common single-family lot sizes lead to population densities too low to support frequent and direct transit service. Predominant suburban development patterns force all local trips for shopping, recreation, school, and commuting onto the arterial street system. This leads to ever wider, more congested arterial streets, which in turn discourage people from walking or cycling to nearby destinations.

Policy 2-1: Make air quality and mobility prime considerations when reviewing any proposed change to the land use pattern in the Coalinga planning area.

Policy 2-2: Support projects that propose pedestrian or transit oriented designs at suitable locations.

Policy 2-3: Plan areas within 1/4 mile of transit hubs and commercial centers for higher density development.

Policy 2-4: Encourage higher housing densities in areas served by the full range of urban services.

Policy 2-5: Encourage mixed-use developments that provide commercial services such as day care centers, restaurants, banks, and stores near employment centers.

Policy 2-6: Promote downtown Coalinga as the primary pedestrian-oriented, commercial, and financial center in the City.

Policy 2-7: Ensure that adequate neighborhood commercial shopping areas are provided to serve new residential developments.

Policy 2-8: Encourage subdivision designs that provide neighborhood parks in proximity to activity centers such as schools, libraries, and community centers.

Policy 2-9: Work closely with the Coalinga-Huron Unified School District to help the District choose school sites that allow students to safely walk or bicycle from their homes.

Policy 2-10: Require park and ride lots at appropriate locations to serve long distance and local commuters.

Jobs/Housing Balance

Jobs/housing balance is the ratio of jobs to the supply of housing in a defined area. Programs to influence the jobs/housing balance are based on the premise that if a better match of employment and housing is provided, people will choose to live near their work. This will result in shorter commuter trips, lower vehicle miles traveled, and improved air quality.

The City can influence where people live and work in two important ways. First, if housing types and costs do not match the incomes of employees working in an area, they will commute to an area where they can afford to live. Second, if the zoning in an area is excessively restrictive, compatible business uses are precluded from locating near housing. The City cannot make people live near their work or force businesses to locate in Coalinga. The City can, however, create an environment that encourages a jobs/housing balance by removing barriers to the type of development needed to achieve the balance.

Policy 2-11: Work with public and private organizations (e.g., the Chamber of Commerce, West Hills College) to attract employers to the community to help achieve a jobs/housing balance.

Policy 2-12: Provide planning liaison services to potential employers to identify appropriate sites, assist in the environmental review process, and streamline the permit process.

Compact Development

Sprawling, low-density development and discontinuous development discourage the use of alternative transportation modes and increase travel distances. Infrastructure costs and environmental impacts are less when development is more compact.

Policy 2-13: Plan adequate urban land to support development for a maximum of 20 years based on Department of Finance population projections.

Policy 2-14: Discourage discontinuous development by: (1) supporting projects that infill vacant areas contiguous on at least one side to a developed area; (2) not considering projects "contiguous" when they are only adjacent to vacant urban-designated land; (3) encouraging growth in and around activity centers, transportation nodes, underutilized infrastructure systems, and redevelopment areas; and (4) accommodating infill development within existing urban areas as a priority over urban expansion.

Policy 2-15: Consider redesignating vacant lands suitable for higher densities or for transit/pedestrian oriented developments during General Plan updates and periodic reviews.

Policy 2-16: Adopt an urban limit line, and commit to providing public services only within the urban area.

Policy 2-17: Designate water and sewer service areas that closely correspond to the land use plan.

Policy 2-18: Expand public services incrementally to serve contiguous development, and discourage the development of small sewer and water districts serving fringe development.

Site Design

Most sites in Coalinga are designed to provide the most direct and convenient access by car to the exclusion of other transportation modes. Sites can be designed in ways that encourage pedestrian access and less-polluting transportation modes while still supporting access by motor vehicles. As of May 1994, the San Joaquin Valley Unified Air Pollution Control District was preparing air quality impact assessment guidelines and a mitigation quantification handbook, expected to be completed in 1994, to help local governments assess and mitigate project-specific air quality impacts. The District will also prepare model design guidelines in 1994 to help local governments increase pedestrian access and the use of other transportation modes.

Policy 2-19: Require developers to design project sites to increase the convenience, safety, and comfort of transit users, pedestrians, and bicyclists.

Policy 2-20: Require developers of projects that generate emissions in excess of District CEQA significance thresholds to submit a project air quality/transportation design analysis prepared by a civil engineer, architect, or urban designer familiar with design measures that reduce vehicle trips. This requirement shall be completed prior to the City accepting the project application. When the model design guidelines are adopted by the District, the City of Coalinga will review and implement them as appropriate for specific projects.

Policy 2-21: Require all subdivision street and lot designs, commercial site plans, and multifamily site plans for projects exceeding District size thresholds to include design features that reduce trips and vehicle miles traveled, as recommended by the City.

Transportation Infrastructure

The transportation infrastructure developed in the Coalinga area supports the automobile at the expense of other modes of transportation. Placing new emphasis on transit, bicycling, and pedestrian infrastructure can relieve pressure from the traditional roadway system and improve air quality.

Policy 2-22: Vigorously pursue and use State and federal funds earmarked for bicycle and transit improvements.

Policy 2-23: Provide transportation infrastructure that allows the efficient local and regional movement of people, raw materials, and goods.

Policy 2-24: Require dedication of land for bus turnouts and shelters at sites deemed appropriate and necessary by the City and the transit providers.

Policy 2-25: Design arterial and collector streets to allow the efficient operation of public transit.

Policy 2-26: Ensure that a comprehensive system of bikeways and pedestrian paths is planned and constructed in accordance with the General Plan.

Policy 2-27: Require developers to fund the extension of regional and commuter bikeways to serve their developments. In those areas where bikeways are not feasible, developers shall contribute to a City bikeways fund.

Policy 2-28: Ensure that upgrades to existing roads include bicycle and pedestrian improvements consistent with General Plan policy.

Policy 2-29: Require developers to provide bicycle racks, or enclosed and locked bicycle storage, at major activity centers, offices, and commercial establishments to serve patrons and employees.

CONGESTION MANAGEMENT AND TRANSPORTATION CONTROL MEASURES

Recent State and federal legislation requires local government to include strategies to increase the efficiency of transportation infrastructure and to reduce vehicle trips in their transportation plans. Coalinga can support this strategy by requiring developers to construct infrastructure that supports programs to reduce congestion and vehicle trips.

Transportation control measures are most effective when infrastructure is in place which supports alternative transportation modes. This would include community-wide transportation improvements and on-site improvements at individual worksites and businesses.

GOAL 3: Reduce traffic congestion and vehicle trips through more efficient infrastructure and support for trip reduction programs.

Policy 3-1: Consider measures to increase the capacity of the existing road network prior to constructing more capacity (e.g., maximize the capacity of existing lanes before adding new lanes).

Policy 3-2: Require new development to provide facilities and programs that increase the effectiveness of transportation control measures (e.g., employer based trip reduction programs and transit programs).

Policy 3-3: Provide reduced parking requirements as an incentive for projects to incorporate measures proven to reduce employee commute trips or customer trips.

Policy 3-4: Work with employers and developers to provide employees and residents with attractive, affordable transportation alternatives.

Policy 3-5: Require new public facilities, homes and businesses to be wired with fiber-optic cables, and encourage the development of video-teleconferencing facilities.

TOXIC AND HAZARDOUS EMISSIONS

Public concern over exposure to toxic and hazardous emissions has never been greater. Past siting decisions for industrial and residential development have created conflicts where none should have existed. Providing appropriate areas for all types of development can minimize conflicts and promote economic growth.

GOAL 4: Minimize exposure of the public to toxic air pollutant emissions and noxious odors from industrial, manufacturing, and processing facilities.

Policy 4-1: Require residential development projects and projects categorized as sensitive receptors to provide buffers to separate those uses from freeways, major arterials, industrial sites, and hazardous materials locations.

Policy 4-2: Require new air pollution point sources such as, but not limited to, industrial, manufacturing, and processing facilities, to be located an adequate distance from residential areas and sensitive receptors.

Policy 4-3: Locate air pollution sensitive land uses (e.g., hospitals, convalescent homes, residences, schools) away from existing developed and undeveloped industrial sites in recognition that the potential exists for those sites to contain industrial processes that may emit toxic and hazardous pollutants at some future date.

FUGITIVE DUST AND PM10

The levels of PM10 (particulate matter less than 10 microns in diameter) exceed State and federal health base standards. The San Joaquin Valley is designated as a serious nonattainment area for PM10 and is subject to a series of federal mandates aimed at achieving the federal ambient air quality standards. These include adoption of contingency measures by February 8, 1996, and implementation of Best Available Control Measures (BACM) by February 8, 1997. Control efforts for sources under the jurisdiction of the City of Coalinga can significantly reduce these emissions.

GOAL 5: Reduce particulate emissions from sources under the jurisdiction of the City of Coalinga.

Policy 5-1: Require measures to reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible, including implementation of District Regulation VIII.

Policy 5-2: Require developers to pave all access roads, driveways, and parking areas serving new commercial and industrial development. (Note: alleys primarily serving residential uses are not included under this policy).

ENERGY

Natural gas burning appliances used for space heating, water heating, and cooking are sizable source of NO_x emissions. Consumption of electricity causes pollutant emissions when the power plant is fueled by fossil fuels. Local efforts to reduce energy consumption can improve air quality and save consumers money. Simple and cost-effective designs, technologies, and methods are available to achieve energy savings and reduce air pollutant emissions.

GOAL 6: Reduce emissions related to energy consumption and area sources.

Policy 6-1: Work with local energy providers on voluntary incentive-based programs to encourage developers to use energy efficient designs and equipment beyond the requirements of Title 24.

Policy 6-2: Cooperate with the local building industry, utilities, and the District to develop enhanced energy conservation standards for new construction.

Policy 6-3: Require new developments to reduce air quality impacts from residential area sources and from energy consumption for heating and cooling.

WOOD BURNING

Residential wood burning contributes to winter carbon monoxide and PM₁₀ emissions and exceedances of State and federal standards in the San Joaquin Valley. Fireplace and wood stove technology and products are readily available to significantly reduce these emissions at a reasonable cost.

GOAL 7: Minimize air pollution emissions from wood burning fireplaces and appliances.

Policy 7-1: Encourage developers to limit fireplace installations in new development.

Policy 7-2: Encourage developers to install low-emitting, EPA-certified fireplace inserts and wood stoves; pellet stoves; or natural gas fireplaces. As part of this policy, monitor implementation of District Rule 4901 (Residential Wood Burning).

AIRPORT LAND USE PLAN

The New Coalinga Airport has replaced the old municipal airport. Unlike many airports, the New Coalinga Airport is located in an undeveloped area where the only surrounding existing and planned land uses are agriculture and wildlife conservation areas. The old airport's previous problems of land use compatibility, safety, and noise have been virtually eliminated by the new airport. Operation of the New Coalinga Airport will be guided by the Airport Master Plan (January 5, 1990), which was reviewed and approved by the California Department of Transportation (Caltrans), Division of Aeronautics.

This Airport Land Use Plan (ALUP) will help ensure that the New Coalinga Airport operates in accordance with the Airport Master Plan and the goals, policies, and programs of the City of Coalinga General Plan.

1.0 SCOPE OF THE PLAN

1.1 Authority and Purpose

The objectives of this Airport Land Use Plan are:

- To safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general by minimizing public exposure to excessive noise and safety hazards;
- To provide for the orderly growth of the New Coalinga Airport by promoting the overall goals and objectives of California airport noise standards and by preventing the creation of new noise and safety problems; and
- To promote the development of land uses near the airport proper which are compatible with airport operations.

To accomplish these objectives, the Airport Land Use Plan defines land use policies and implementation programs to maintain land use compatibility between the airport and surrounding land uses. The ALUP has been prepared to fulfill the requirements of Section 21675 of the Public Utilities Code, Chapter 4, Article 3.5 (State Aeronautics Act) for airport comprehensive land use plans.

The ALUP also is part of the City of Coalinga General Plan. Therefore, the ALUP responds to the State requirements of both a general plan and an airport comprehensive land use plan. Upon adoption, the City of Coalinga General Plan and the ALUP will be consistent with each other, as mandated by the State in Title 7, Division I, Chapter 3, Section 65302.3(a) of the State Planning, Zoning, and Development Law. The section states, "The general plan...shall be consistent

with the [airport land use] plan adopted or amended pursuant to Section 21676 of the Public Utilities Code."

When approved by the Fresno County Airport Land Use Commission (ALUC), the Coalinga Airport Land Use Plan will be implemented by the City of Coalinga as part of its General Plan.

1.2 Geographic Coverage and Jurisdictions Affected

The Airport Environs for the New Coalinga Airport encompasses the Approach and Clear Zone Plan (ACZP) as identified in the Airport Master Plan for the New Coalinga Airport. The Airport Environs, which include the ultimate airport property and clear zone, are located within Township 20 South, Range 15 East, Sections 23, 24, 25, 30, and 31 MDB&M (Mount Diablo Base & Meridian). Sections 23, 24, 25, and 31 are entirely within the City of Coalinga Area of Interest. The ultimate acreage of the airport will be approximately 1,125 acres; the 20-year buildout will total about 960 acres.

A small portion of the ultimate clear zone extends into Township 20 South, Range 16 East, Section 30, which is east of Calaveras Avenue; the affected land is an agricultural field.

Figure 1 depicts the Approach and Clear Zone Plan (ACZP) for the New Coalinga Airport, as illustrated in the Airport Master Plan.

2.0 THE NEW COALINGA AIRPORT

2.1 Relationship to the Airport Master Plan

The Airport Master Plan for the New Coalinga Airport was adopted by the Coalinga City Council on January 18, 1990. The California Department of Transportation (Caltrans), Division of Aeronautics, recommended adoption and implementation of the plan on November 13, 1989.

2.2 Airport Operations at the New Coalinga Airport

The New Coalinga Airport is a general aviation airport with one runway and approximately 35 based aircraft. These aircraft total about 17,500 annual operations (i.e., an average of 500 operations per based aircraft).

The predominate aircraft type at the New Coalinga Airport is the single-engine piston aircraft, comprising over 80 percent of the based aircraft. The remaining based aircraft are multi-engine aircraft and helicopters.

By the year 2000, the number of based aircraft is forecast at 40 (20,000 annual operations). By the year 2010, 50 based aircraft are expected to total 25,000 annual operations. The ultimate buildout (50 years) of the New Coalinga Airport is planned for 100 based aircraft and 50,000 annual operations.

2.3 Noise Zones

Noise Contours

The existing and forecast 65 CNEL contour for the New Coalinga Airport is completely within the airport property and undeveloped future aviation easement. Existing and planned land uses within the Airport Environs are public facilities and, for the undeveloped future aviation easement, agriculture and wildlife conservation area. No residences currently are located within the 65 CNEL.

Should any residential structures (associated with agriculture) be proposed in the future within the 65 CNEL, the City's decision making will be guided by the following goal and policies:

GOAL 1: Utilize all feasible air operations and airport facility modifications to minimize and, where possible, reduce the numbers of residents impacted by noise from the New Coalinga Airport.

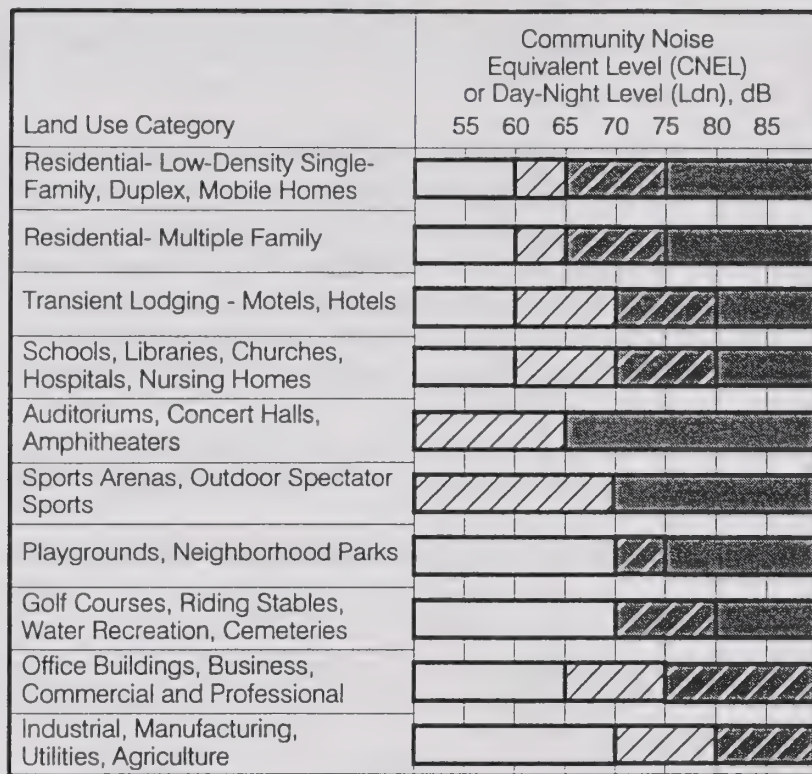
Policy 1.1: No structure shall be constructed within the initial clear zone, ultimate clear zone, or approach safety zone of the New Coalinga Airport.

Policy 1.2: Any existing habitable structure within the airport property shall be insulated for noise in accordance with the California Noise Insulation Standards (Code of Regulations, Title 24, Part II, Appendix Chapter 35), part of which states, "Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room."

Policy 1.3: The New Coalinga Airport shall operate in accordance with the California Airport Noise Standards (Code of Regulations, Title 21, Sections 5000 et seq.).

Land Use Compatibility Guidelines for Noise Impact

Land uses vary widely by their sensitivity to aircraft noise. Figure 2 shows compatibility guidelines for a range of land uses. For example, the figure




Nature of the noise environment where the CNEL or Ldn level is:

Below 55 dB
Relatively quiet suburban or urban areas, no arterial streets within 1 block, no freeways within 1/4 mile.

55-65 dB
Most somewhat noisy urban areas, near but not directly adjacent to high volumes of traffic.

65-75 dB
Very noisy urban areas near arterials, freeways or airports.

75+ dB
Extremely noisy urban areas adjacent to freeways or under airport traffic patterns. Hearing damage with constant exposure outdoors.

 Normally Acceptable


Specified land use is satisfactory, based on the assumption that any buildings are of normal conventional construction, without any special noise insulation requirements

 Conditionally Acceptable

New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

 Normally Unacceptable

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in design.

 Clearly Unacceptable

New construction or development should generally not be undertaken.

The Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (Ldn) are measures of the 24-hour noise environment. They represent the constant A-weighted noise level that would be measured if all the sound energy received over the day were averaged. In order to account for the greater sensitivity of people to noise at night, the CNEL weighting includes a 5-decibel penalty on noise between 7:00 p.m. and 10:00 p.m. and a 10-decibel penalty on noise between 10:00 p.m. and 7:00 a.m. of the next day. The Ldn includes only the 10-decibel weighting for late-night noise events. For practical purposes, the two measures are equivalent for typical urban noise environments.

This figure illustrates the acceptability of various land uses in areas exposed to various levels of environmental noise.

Source: Cotton/Beland/Associates, adapted from City of Los Angeles EIR Manual for Private Projects, U.S. Department of Housing and Urban Development and State of California Guidelines and U.S. EPA, Report on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, 1974.

Figure 2
Land Use Compatibility Guidelines
for Noise Impacts

illustrates that crop agriculture is "normally acceptable" up to 70 CNEL, livestock uses are "normally acceptable" up to 70 CNEL, and single-family residential uses are "normally acceptable" up to 60 CNEL. Retail and industrial uses are "normally acceptable" up to 65 CNEL.

For residential uses, interior environments usually can be made acceptable if a noise analysis is undertaken and insulation features incorporated into project design. However, the outdoor environment may not be pleasant. The Caltrans Airport Land Use Planning Handbook suggests that a minimum noise reduction of 25 decibels be incorporated into residential construction and adds, "Communities should consider precluding new housing from this area, particularly if the population is oriented to outdoor activities."

The following goal and policy will help ensure minimal noise impacts from the New Coalinga Airport:

GOAL 2: Protect residents and workers from the adverse effects of aircraft noise.

Policy 2.1: Compatibility guidelines for noise sensitive land uses shall be shown as in Figure 2.

2.4 Air Safety Zones

Aircraft accidents do not occur frequently, and the likelihood of an accident cannot be precisely measured. As a result, it is not possible to quantify exposure to accident potential in the way that noise contours are developed. Data gathered by the National Transportation Safety Board (NTSB) indicate that most fatal aircraft accidents occur on aircraft property. Fewer accidents occur in the surrounding area, with an approximately equal number taking place within one mile and between one and five miles from the airport boundary.

Definition of Zones

The State Airport Land Use Planning Handbook allows jurisdictions considerable flexibility in determining air safety zones. Many airport land use plans utilize the federal imaginary surfaces to define air safety zones. Federal Aviation Regulations (FARs) are issued by the Federal Aviation Administration (FAA) to regulate air commerce and are issued as separate "Parts." FAR Part 77 ("Objects Affecting Navigable Airspace") establishes standards for determining obstructions in navigable airspace and is intended to insure that development in the airport vicinity does not compromise air safety.

The FAA clear zones are trapezoidal areas at each runway end, where safety concerns are greatest due to the potential for crashes on takeoffs and landings. Within a given airport, the clear zones may not be of uniform length or width,

varying by the type of aircraft using the runway and whether the runway is equipped with an instrument landing system (ILS). Where early turn procedures on departure result in sharp turns before an aircraft reaches the end of the runway, a secondary clear zone aligned with this curved departure route often is designated.

The Part 77 approach surface is an FAA imaginary surface that extends beyond the clear zone, sloping upward from the runway at an angle determined by the mix of aircraft and airport weather capability. The approach surface is defined in order to give aircraft an unobstructed flight path to the runway. The imaginary shadow that this imaginary surface casts on the ground defines the approach safety zone. Though less hazardous than clear zones, approach safety zones still contains potential for accidents.

Previous Figure 1 depicts the Approach and Clear Zone Plan (ACZP) for the New Coalinga Airport, as illustrated in the Airport Master Plan.

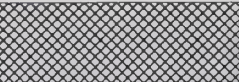

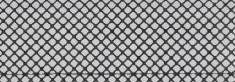










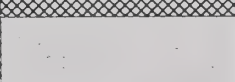

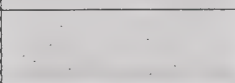

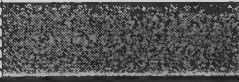

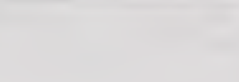
Initial airport development assumed visual clear zones, but the 20-year buildout under the Airport Master Plan, including the ACZP, allows for a precision instrument approach and the appropriate clear zone.

The City of Coalinga owns the clear zones and approach safety zones for the New Coalinga Airport, except for the portion of the ultimate clear zone extending into an agricultural field. For this portion of land, an avigation easement eventually will be required from the property owner.

All future development in the clear zones and approach safety zones will be in accordance with FAR Part 77, the Coalinga General Plan, and applicable land use regulations.

Land Use Compatibility Guidelines for Air Safety

A clear zone must be "clear" - devoid of structures. Most often, clear zones are owned in fee by the airport operator and are within the airport boundary. The approach safety zones should not contain tall buildings, land uses that have a potential for explosion, or which generate electric interference, dust, or smoke, or which attract birds. Limitations should be imposed on site coverage to give disabled aircraft the opportunity to avoid occupied structures. Uses that gather large concentrations of people should be avoided to curtail casualties in case of accident. Figure 3 shows land use compatibility guidelines for areas within clear zones and approach safety zones.

Land Use Categories		Air Safety Zone	
Category	Use	Clear Zones	Approach Safety Zone
Residential	Single-Family		
	Multi-Family		
Commercial	Hotel / Motel Transient Lodging		
	Restaurant / Bar		
	Office / Retail		
	Service Station		
Industrial	Manufacturing		
	Business Park		
Institutional	Schools		
	Auditoriums		
Open Space	Parks		
	Golf Course		
Agriculture	Agriculture		



NORMALLY COMPATIBLE
Specified land use is satisfactory.



COMPATIBLE WITH RESTRICTIONS
Density limited to 3 du per acre or floor area ratio of 0.25.
No flammables, uses which attract birds, overhead power lines,
electrical interference, smoke, high intensity lighting, or concentration of people.



COMPATIBLE USE
No structures.



INCOMPATIBLE USE

Source: Caltrans, CBA Inc. Adapted from
Airport Land Use Planning Handbook.

Figure 3
Land Use Compatibility
Guidelines for Air Safety

Defining air safety zones and implementing land use guidelines minimize the risk within the zone, but crashes may still occur outside the air safety zones. Typically, the air safety zones are based on normal flight paths. When aircraft become disabled, however, they are likely to deviate the normal flight path, either because the pilot is taking the most direct route to the runway or because the aircraft is out of control. There is no way of predicting the path of a disabled aircraft. Even with the implementation of the air safety land use guidelines, the possibility of an aircraft accident outside the air safety zone will always remain.

The following goal and policies will minimize the potential for casualties and property damage in the event of an aircraft accident at the New Coalinga Airport:

GOAL 3: Protect all people within air safety zones from excessive exposure to aircraft accident potential.

Policy 3.1: Implement the airport land use compatibility guidelines for air safety as illustrated in Figure 3.

Policy 3.2: Permit only undeveloped land, wildlife conservation areas, or agricultural uses, as defined in the Coalinga General Plan and Fresno County General Plan, in the air safety zones.

Policy 3.3: Continue to consult with the FAA regarding the height of structures within the Part 77 approach surfaces of the Airport Environs.

2.5 AIRPORT ENVIRONS LAND USE PLAN

This section of the ALUP designates the proposed general distribution, location, and extent of land uses in the Airport Environs. All airport-related uses are located on airport property. The Airport Environs include, and are designated for, public facilities, except for the undeveloped future aviation easement, which is designated for agriculture and wildlife conservation area. Figure 4 illustrates land use policy in the Airport Environs.

2.6 GENERAL NUISANCE/AVIGATION EASEMENT POLICY

Avigation Easement

1. Except when overriding circumstances exist, a condition for approval of any residential subdivision or zoning change within an airport's review areas shall be the dedication of an avigation easement to the airport owner or the local jurisdiction in which the proposed subdivision is located (City of Coalinga if area is incorporated; Fresno County, if area is

unincorporated). The aviation easement shall contain the following property rights:

- a. Right-of-flight at any altitude above acquired easement surfaces.
- b. Right to cause noise, vibrations, fumes, dust, and fuel particle emissions.
- c. Right-of-entry to remove, mark, or light any structures or growths above easement surfaces.
- d. Right to prohibit creation of electrical interference, unusual light sources, and other hazards to aircraft flight.

The easement surfaces acquired shall be based on Part 77 of the Federal Aviation Regulations except that no easement surface less than 35 feet above ground shall be acquired.

2. As a further condition for approval of a residential subdivision or zoning change within an airport's high noise or high risk area, local jurisdiction shall, except where overriding circumstances exist, require the property owners to agree to the following:
 - a. That it is understood by the owners and owners' successors in interest that the real property in question lies close to an operating airport and that the operation of the airport and the landing and take-off of aircraft may generate high noise levels.
 - b. That the owners shall not initiate or support any action in any court or before any governmental agency if the purpose of the action is to interfere with, restrict, or reduce the operation of the airport or the use of an airport by any aircraft.
 - c. That the owners shall not protest or object to the operation of the airport or the landing or take-off of aircraft before any court or agency of government.
3. The above easement, agreement, conditions, and restrictions shall be recorded in the office of the Fresno County Clerk/Recorder, shall run with the land and shall be binding upon the owners and subsequent owners of the property.

Buyer Notification

The Commission encourages local governments to establish a "buyer notification statement" as a requirement for the transfer of title of any property located within an airport's high noise or high risk area. This statement should indicate

that the buyer is aware of the proximity of an airport, the characteristics of the airport's current and projected activity, and the likelihood of aircraft overflights of the affected property.

2.7 POLICY REGARDING SCOPE OF COMMISSION REVIEW

1. For the purposes of referral to the Airport Land Use Commission, a "proposed project" is defined as the adoption of and the amendment to general and specific plans, zoning ordinances, building regulations, and airport master plans. Projects shall be referred to the Commission prior to any action taken by local advisory and governing bodies.

In the case of projects involving the adoption or amendment of an Airport Master Plan, or to the Conditional Use Permit or Site Plan Review for the airport facilities, the project shall be submitted to the Commission for review and comment at the earliest possible point in the application processing and before it is submitted to the Commission for a determination of consistency.

2. Evaluation of projects shall primarily be based on the land use compatibility policies set for the above. Where an overlap occurs among noise, airspace protection, safety, and general nuisance zones, all policies applicable to the particular location shall be considered.
3. All proposed projects involving land lying within the geographic boundaries of the Approach Safety Zone and Clear Zone for the new Coalinga Airport shall be referred to the Fresno County Airport Land Use Commission for review and evaluation as to their consistency with this plan.
4. Within the Conical Surface of the airport, only those projects involving a structure or other object the height of which would exceed that permitted under the adopted land use zoning need be referred to the Commission for review.
5. The Review Area boundaries for the new Coalinga Airport are as depicted on the policy plan map.
6. The Commission may, at its own discretion, request information and review any project occurring within the airport's Secondary Review Area (Conical Surface) for factors other than excessive height. Such projects, however, need not be routinely submitted to the Commission for review.
7. A copy of any Notice of Construction or Alteration submitted to the Federal Aviation Administration in accordance with FAR Part 77, Subpart B, shall concurrently be submitted to the Airport Land Use Commission

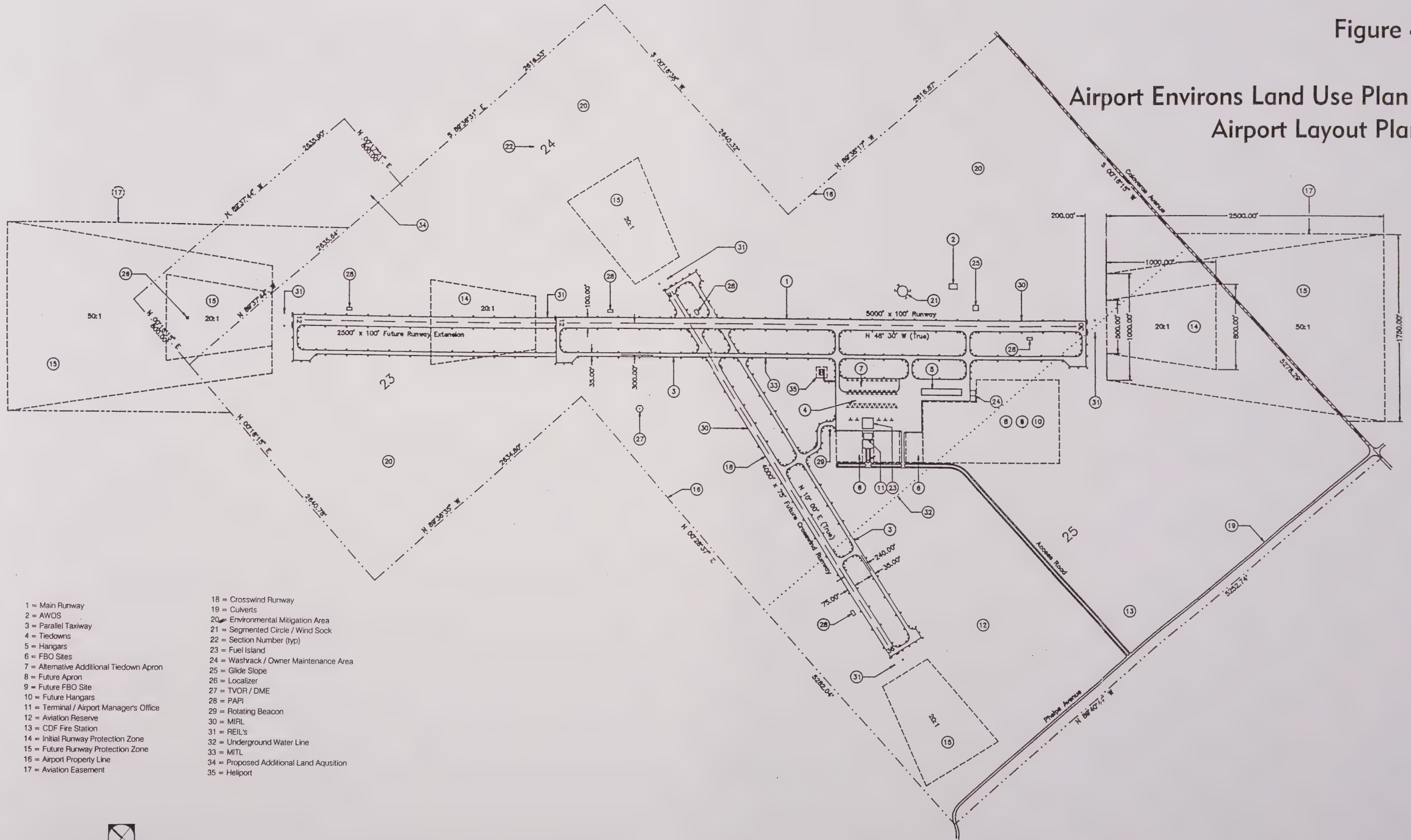
for review regardless of where in the County the object involved is proposed to be located.

2.8 AIRSPACE PROTECTION

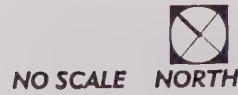
1. No structure, tree, or other object shall be permitted to exceed the height limits established by Part 77, Subpart C, of the Federal Aviation Regulations (FAR) (see Figure 1). This criterion applies unless, in the case of a proposed object or growing tree, one or more of the following apply:
 - a. The object would be substantially shielded by existing permanent structures or terrain in a manner such that it clearly would not affect the safety of air navigation.
 - b. The Federal Aviation Administration has conducted an aeronautical study and either determined that the object would not result in a hazard to air navigation or has made recommendations for the object's proper marking and lighting as an obstruction.
 - c. The object is otherwise exempted from the requirements of FAR Part 77.
2. In the case of an existing object that exceeds the prescribed height limits at the time the Plan is adopted or amended, marking and lighting may still be required.
3. No object shall be permitted to be erected which because of height or other factors would result in an increase in the minimum ceiling or visibility criteria for an existing or proposed instrument approach procedure.
4. An object which would be located within a horizontal or conical zone as defined in FAR Part 77 and would be 35 feet or less in height above the ground (i.e., is within the height limits prescribed by most zoning districts codified within Fresno County) shall be considered conditionally acceptable even if it exceeds the prescribed FAR Part 77 height limit due to its geographic location. Marking and lighting may be conditions for acceptability.
5. The FAR Part 77 surfaces depicted herein shall be used in conjunction with the above airspace policies to determine whether the height of an object is acceptable.

Figure 4

Airport Environs Land Use Plan / Airport Layout Plan



- 1 = Main Runway
- 2 = AWOS
- 3 = Parallel Taxiway
- 4 = Tiedowns
- 5 = Hangars
- 6 = FBO Sites
- 7 = Alternative Additional Tiedown Apron
- 8 = Future Apron
- 9 = Future FBO Site
- 10 = Future Hangars
- 11 = Terminal / Airport Manager's Office
- 12 = Aviation Reserve
- 13 = CDF Fire Station
- 14 = Initial Runway Protection Zone
- 15 = Future Runway Protection Zone
- 16 = Airport Property Line
- 17 = Aviation Easement
- 18 = Crosswind Runway
- 19 = Culverts
- 20 = Environmental Mitigation Area
- 21 = Segmented Circle / Wind Sock
- 22 = Section Number (typ)
- 23 = Fuel Island
- 24 = Washrack / Owner Maintenance Area
- 25 = Glide Slope
- 26 = Localizer
- 27 = TVOR / DME
- 28 = PAPI
- 29 = Rotating Beacon
- 30 = MRL
- 31 = REIL's
- 32 = Underground Water Line
- 33 = MITL
- 34 = Proposed Additional Land Aquisition
- 35 = Heliport



The map meets the State Planning, Zoning, and Development Law requirement [Section 65302(a)] concerning the designation of "the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land."

The surrounding County land is designated for agriculture and wildlife conservation area, uses that prohibit any urban development which could potentially conflict with airport operations. The Federal Aviation Administration (FAA) and the U.S. Fish and Wildlife Service have developed a formal agreement which accepts the City of Coalinga's mitigation plan and the Pleasant Valley Habitat Conservation Plan as acceptable means for ensuring that airport or urban development does not encroach on lands adjacent to the airport.

**Housing Element
To Be Completed**

PART III: PLANNING CONTEXT

COALINGA GENERAL PLAN

City of Coalinga

August, 1994

Consultants to the City:

CBA
747 East Green Street Suite 400
Pasadena, California 91101

#804

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A. LAND USE

A-1 LAND USE - 1994

Coalinga was established late in the 19th century near the loading site of Coaling Station A; hence the town name. Development occurred adjacent to the spur of the Southern Pacific Railroad serving the coal loading site and greatly expanded when oil was discovered in 1890. The city incorporated in 1906.

The original central business district consisted mostly of two-story brick structures, all of which were destroyed in the 1983 earthquake.

Numerous small residences were built in the oil fields during the early 20th century. Many of these houses were moved later into the townsite.

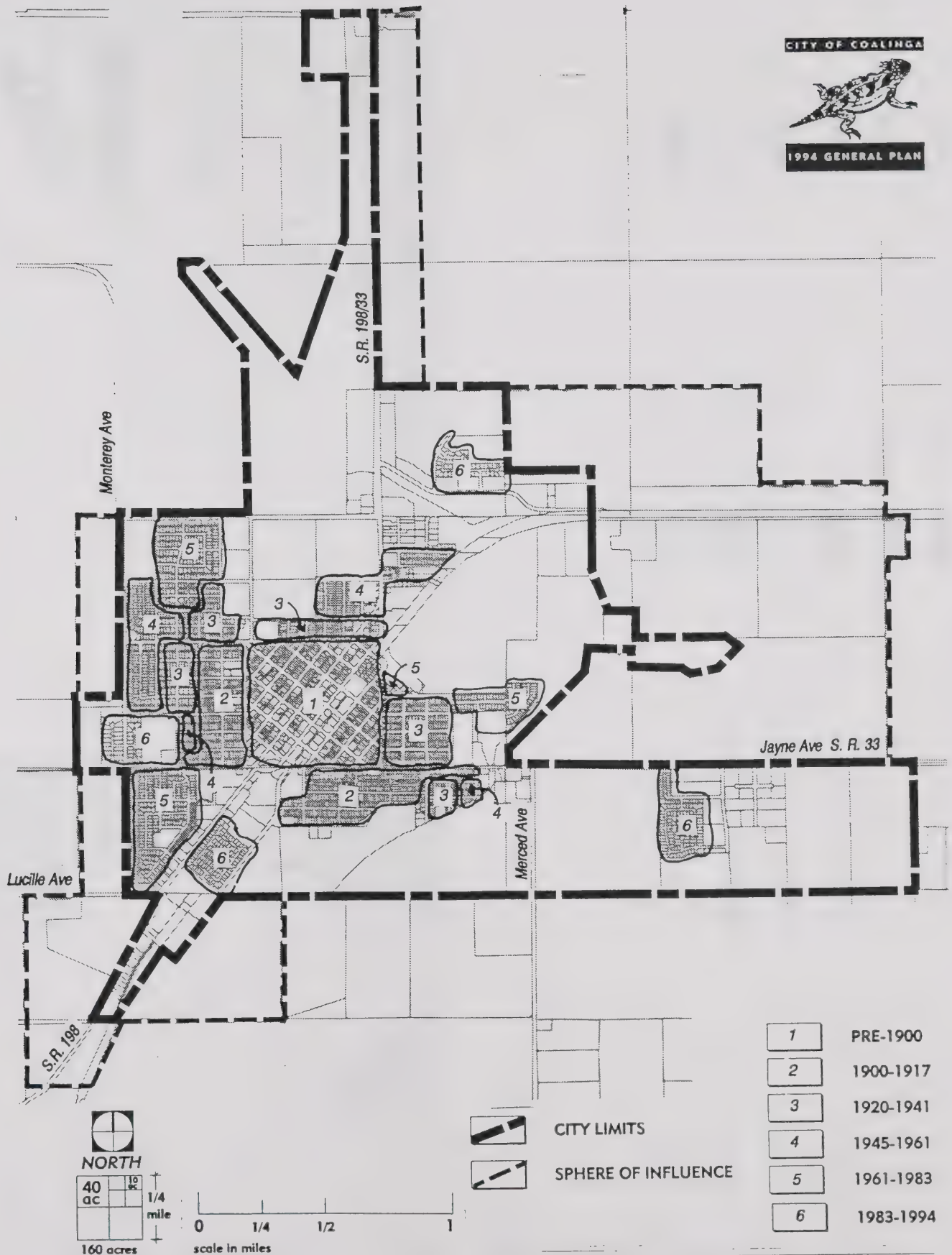
In the late 1920s/early 1930s, oil and gas discoveries in the Kettleman Hills resulted in residential development surrounding the original townsite. The oil and gas industry continued to expand after World War II. In addition, the opening of the Coalinga Canal resulted in considerable expansion of livestock and agricultural interests. Cotton is the principal crop in the region.

A schematic map of historic residential subdivision activity is presented as Figure 1.

Existing land use within the areas addressed by the General Plan is shown on a series of maps as follows:

- Figure 2: Land use within the General Plan Sphere of Influence
- Figure 3: Land use within the General Plan Area of Interest
- Figure 4: Generalized Land Use within the Habitat Conservation Area

Each of these maps includes a table which tabulates, by acres, the various land use categories shown on the map.



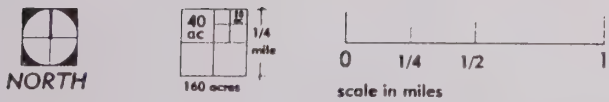
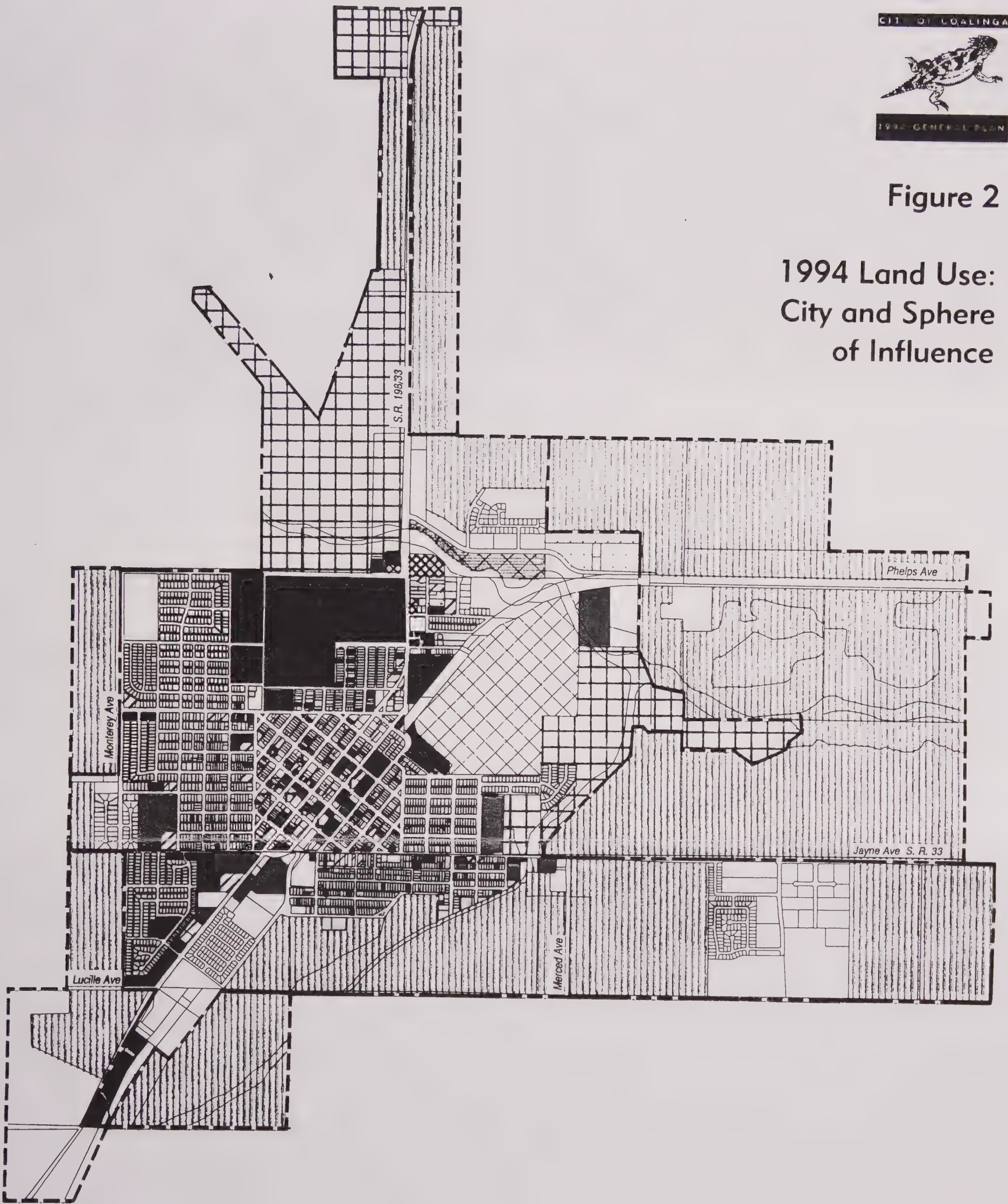
Source: City of Coalinga,
Planning Department, 1994

Figure 1
Historic Residential
Subdivision Activity



Figure 2

1994 Land Use: City and Sphere of Influence



Legend



CITY LIMITS



SPHERE OF INFLUENCE



FIELD CROPS



OPEN SPACE HABITAT



DAIRIES/STABLE/POULTRY



COLLEGE FARMS



VACANT



SINGLE-FAMILY RESIDENTIAL



MOBILE HOMES



APARTMENTS/CONDOS



SERVICE COMMERCIAL



RETAIL



OFFICE



INDUSTRIAL



HOTEL/MOTEL



HOSPITAL



SCHOOL



CHURCH



RECREATION

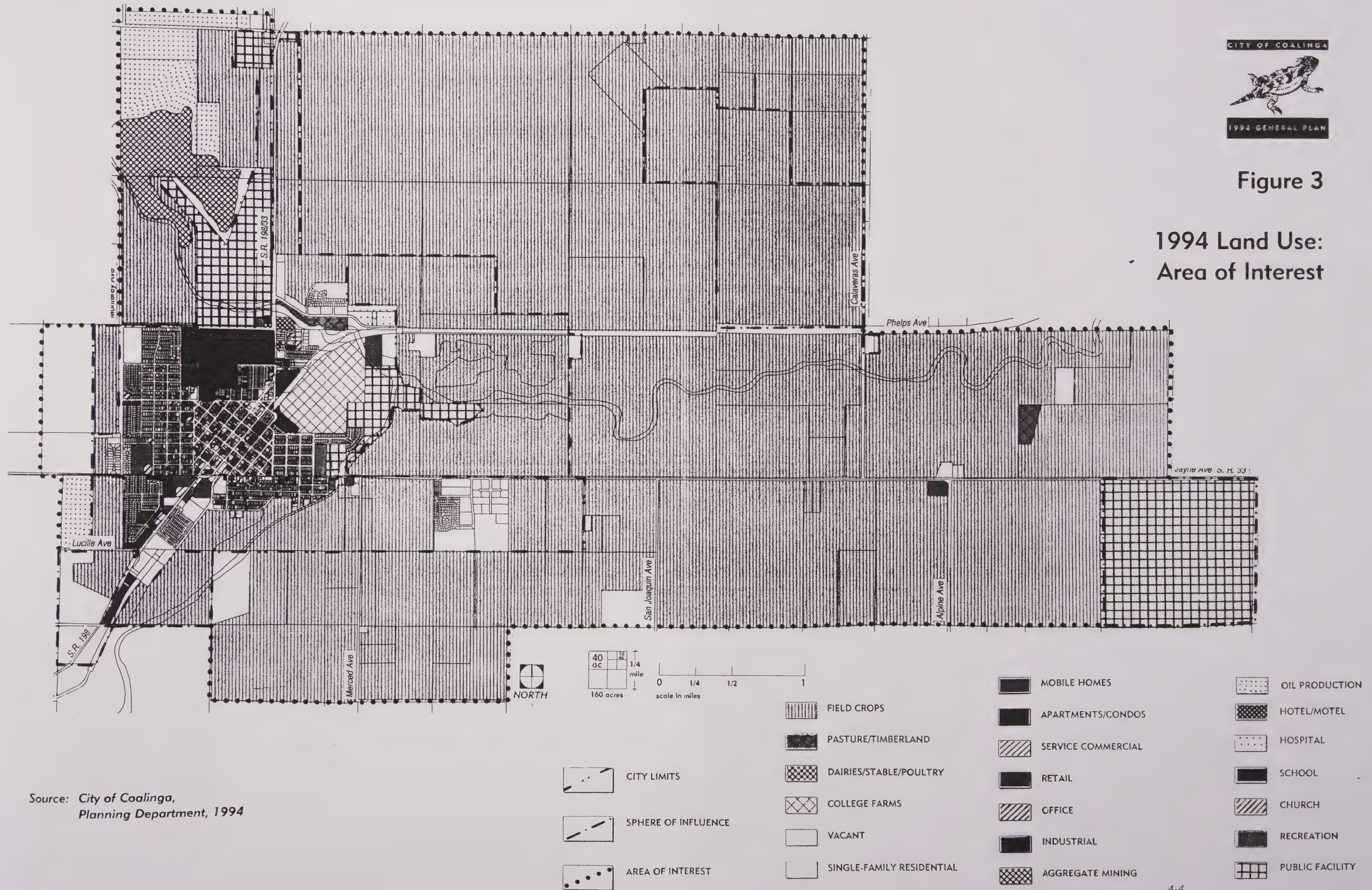


PUBLIC FACILITY

Source: City of Coalinga,
Planning Department, 1994

Figure 3

1994 Land Use: Area of Interest



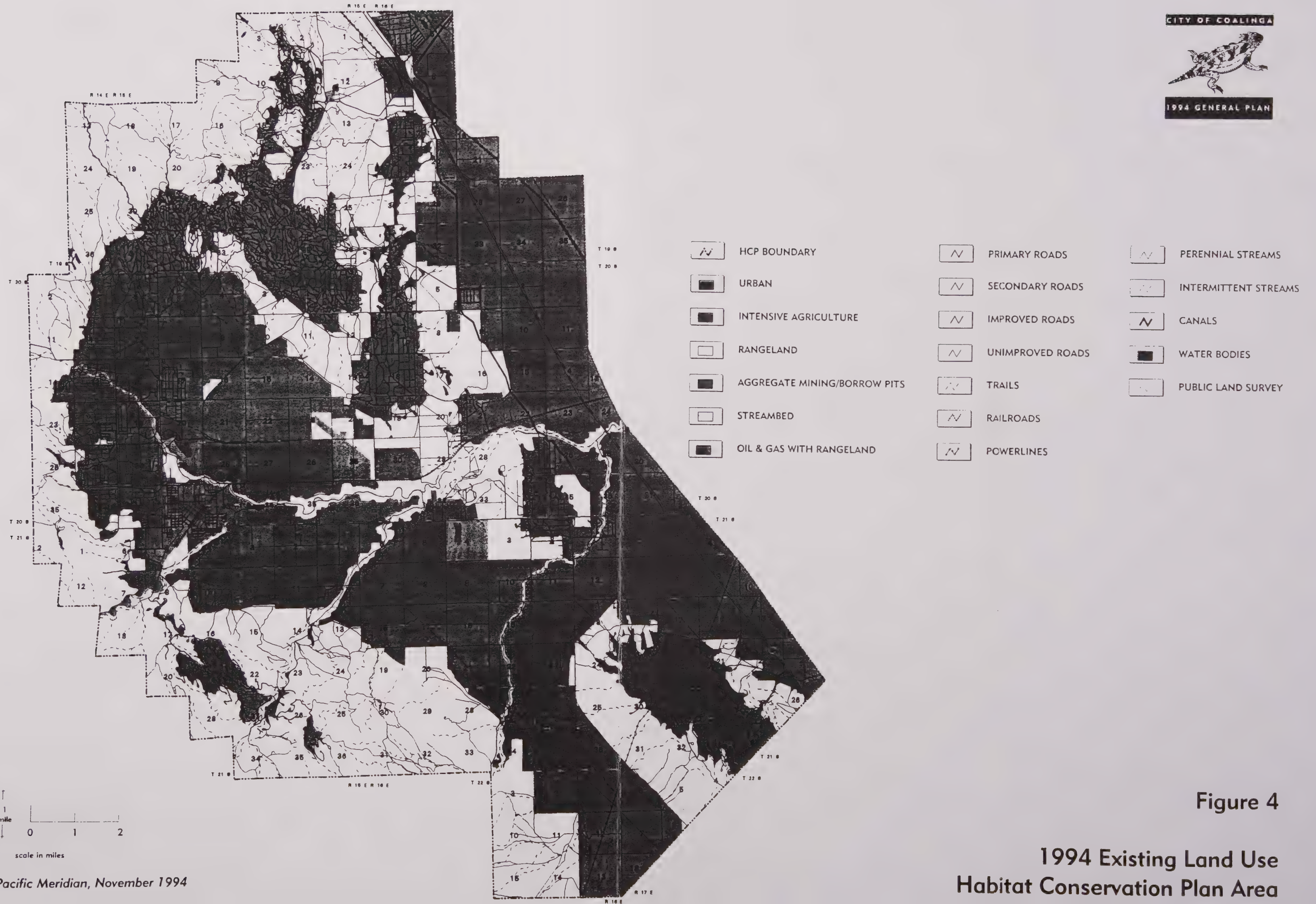


Figure 4

1994 Existing Land Use
Habitat Conservation Plan Area

A-2 GROWTH EXPECTATIONS

Growth Assumptions

Basic assumption concerning future growth follow:

- The established, historical core of Coalinga will be maintained as the focus of the community's identity.
- Future growth in Coalinga will occur around the established core, enabling the efficient use of existing roadway patterns, utility infrastructure, commercial areas, and recreational space.
- Growth will not occur haphazardly as scattered, leap-frog development.
- The area west of Coalinga is not a growth area for a variety of reasons, including:
 - The Habitat Conservation Plan Western Conservation Zone covers a portion of this area;
 - The area is utilized for oil production which can cause a number of environmental constraints for development (such as contaminated soils);
 - The area's hilly topography would require substantial grading; and
 - The area has limited existing infrastructure.
- If development trends between 1990 to 1994 continue, 25 to 50 new residences will be built each year.
- The average persons per household in Coalinga will remain at about 2.8, the ratio reported in the 1990 Census.
- Over the 20-year timespan of the General Plan, the citywide vacancy rate in Coalinga will remain at about 10 percent, the rate reported in the 1990 Census.
- At "build-out" Coalinga will have a total 6,700 units, about 6,000 of which will be occupied at any one time after construction. These units will house approximately 16,300 people.

- New housing for 3,100 residents will be built in Coalinga between 1994 and 2015. This population will require an additional 1,200 dwelling units, approximately 1,100 of which will be occupied at any one time.
- At an average density of about 3.6 units per net acre, approximately 330 residential acres will be developed to meet the additional housing need for the 3,100 new Coalinga residents by the year 2014.
- Accounting for land needed for commercial uses (assumed at 4.7 acres per 1,000 population), for new schools (based on information from the Coalinga-Huron Unified School District), for roads (assumed at 20 percent of total area), for recreation, for open space, and for development constraints, the total area required to accommodate 3,100 new Coalinga residents will be approximately 2.8 square miles.

Growth Areas

The growth expectations discussed above are translated into graphic form on Figure 5. Growth areas C and D underwent environmental analysis and plans for land use in 1992 (East Coalinga Annexation Area). Growth Area B is the land utilized by West Hills College as part of its agricultural program. Although any future use of this land remains undecided, it is expected to become available for development sometime in the future.

The remaining areas are called Growth Area A - North Phelps area and Growth Area E - South Jayne area.

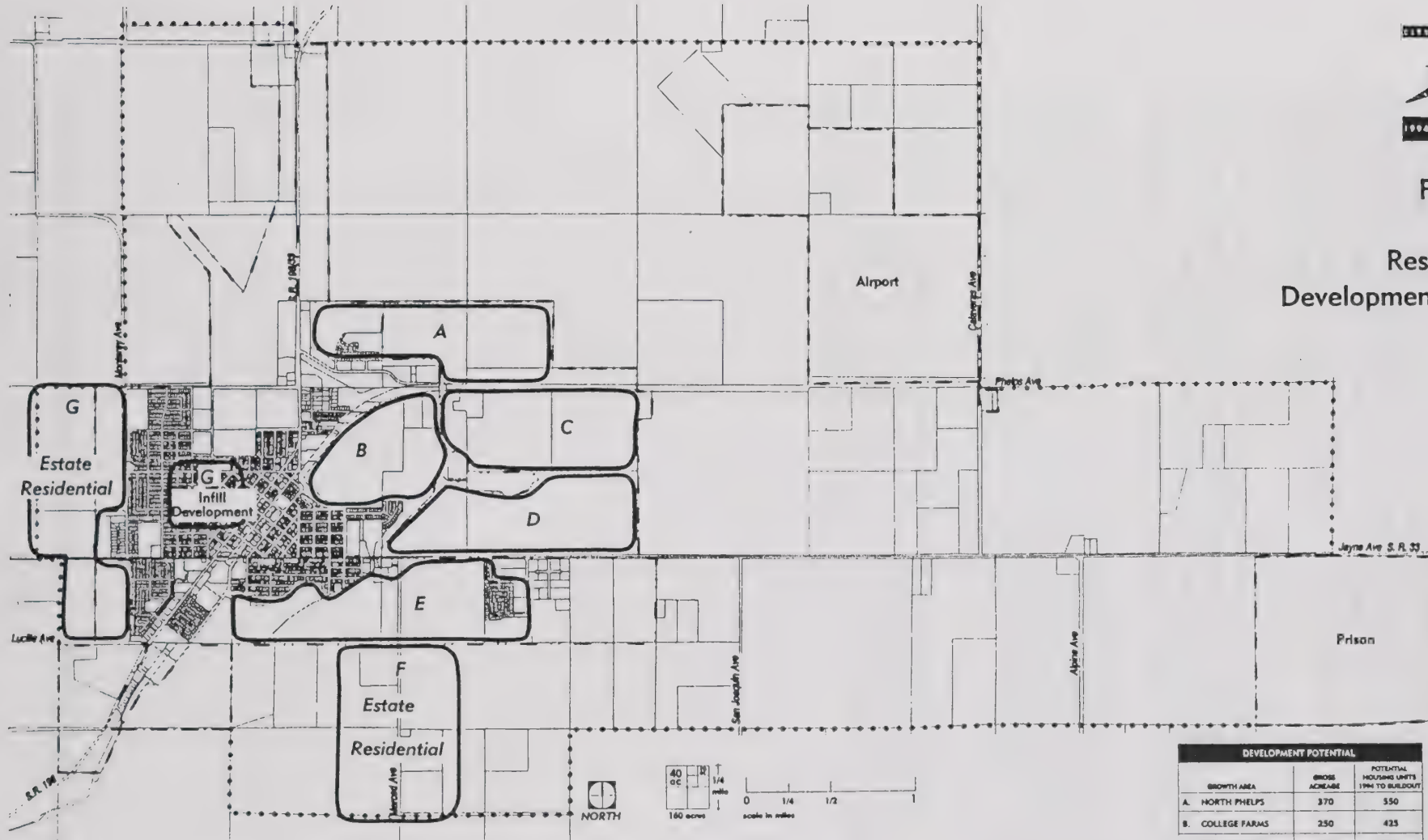
All of the Growth Areas are within the City's Sphere of Influence. The Sphere of Influence surrounds the historical core of Coalinga. It is expected that future generations will use the area which takes advantage of existing roadway patterns, of utility infrastructure, of commercial areas, and of recreational opportunities. The Sphere of Influence area provides adequate land for all future residential, commercial, and industrial uses as well as for schools and for parks. "Leap-frog" development is strictly discouraged.

Additional growth (a maximum of approximately 785 dwelling units) will occur with infill development in the City's historic core. This area corresponds with the City's Redevelopment Project Area (see Exhibit 6). Very low density development (approximately 300 dwelling units) will occur in the form of estate residential projects to the south and to the west of the historical core.

Figure 5

Residential Development Areas

A-8



Source: City of Coalinga, Planning Department, 1994

- CITY LIMITS
- SPHERE OF INFLUENCE
- AREA OF INTEREST

Note: Development potential is an estimate of expected buildout, the actual number of units ultimately developed within a given growth area may vary from the number presented on the table.

DEVELOPMENT POTENTIAL		
GROWTH AREA	GROSS ACREAGE	POTENTIAL HOUSING UNITS 1994 TO BUILDOUT
A. NORTH PHELPS	370	550
B. COLLEGE PARKS	250	425
C. GOLF COURSE	340	500
D. NORTH JAYNE	380	510
E. SOUTH JAYNE	440	330
F. ESTATE RESIDENTIAL AREAS	847	200
G. INFILL DEVELOPMENT (within Redevelopment Project Area, see Exhibit 6)	929	785
TOTAL BUILDOUT	3,549	3,300

Growth Implications

New development in the City of Coalinga will increase the demand for a variety of public services and utilities. For example, residential and commercial development will require water service and police protection. The effects of this growth are described by subject in various sections of the General Plan and in the General Plan EIR Reference Document.

Over the next 20 years, the City of Coalinga could become home to as many as 16,300 people. The General Plan Update will address this level of growth. The Update also will address how growth can occur while avoiding damage to the environment and while improving the overall quality of life in Coalinga.

Increases in population can be accommodated within a relatively small area compared to Coalinga's entire Area of Interest. The area is located primarily between the historic core of the City and the prison and airport sites to the east. While much of this area of interest will remain agricultural, access to utilities and to services is linked directly to the City.

The City of Coalinga continues to play an increasingly important role in the region. The state prison and the municipal airport generate new employees, new residents, and in addition, visitors, who depend on Coalinga for housing, for shopping opportunities, and for public services.

B. PUBLIC SERVICES

This section describes the various public services provided to city residents including fire protection, police protection, and schools.

B-1 FIRE PROTECTION

Setting

Fire protection is available from the City of Coalinga Fire Department located at Elm Avenue and Seventh Street. The department consists of eleven (11) full-time firemen and approximately forty (40) volunteers (1994). The department also operates and maintains two ambulances. All portions of the city (1993) are within two miles of the station.¹ This station provides four fire engines, one paramedic unit, and one basic life support unit. The City's general fund supports all services of the department. The City receives monthly revenue for the ambulance service from the Fresno County Health Department and the Coalinga Hospital District.

The City has "mutual aid" and "instant aid" agreements with the Westside Fire Protection District II (WFPD). WFPD automatically responds to critical facility fires in Coalinga. Critical facilities (i.e., those facilities which are occupied) in the city include schools, convalescent homes, prisons and the hospital. In return, the Coalinga Fire Department responds to any fire within one-half mile of the City's incorporated boundary.

A regular weed abatement program is enforced, and a review of new development proposals is provided by the department to assure fire prevention goals are met.

The Insurance Services Office (ISO) Commercial Risk Services, Inc. provides fire insurance ratings for communities according to the adequacy of their fire protection services and according to the presence of particular fire hazards. The rating system is based on the level of service provided to a community. The City of Coalinga has received (1993) an ISO protection classification rating of 3 on a scale where a rating of 1 is optimum and 10 is unprotected.

Past deficiencies in the water delivery system were corrected in the early 1990's. This entailed construction of the Calaveras Reservoir and a second feed

¹City of Coalinga, Department of Planning Municipal Service Plan, 1993.

down Elm Avenue, across the old airport property, connecting with a line in Phelps Avenue.

Fire Protection Analysis

In order to maintain adequate fire protection and services for additional projected development outlined in the General Plan, the City must increase its level of protection in the planning area.

Fire department needs, determined on a project-by-project basis, consider historic activity of similar uses. An annual needs program is submitted to the City for review. The specific type and phasing of development is undetermined at this time. Given the long implementation period of the General Plan, it is impossible to determine the increased need for manpower and equipment. However, increasing fire protection levels will require additional manpower, training and equipment. With regular and timely service upgrades, new development will not exceed levels of protection.

The other consideration with regard to fire protection services for the city is the amount of emergency water storage. Emergency water storage is the water volume recommended to meet demand during emergency situations. In Coalinga, the most probable cause of a total loss of supply would be a major earthquake. It is likely that the damage to the imported water system would occur for an undetermined period of time. During this time the only water available would be stored in "earthquake-resistant" steel or concrete tanks. The City provides water for fire fighting in two major tanks, one at Palmer and Derrick and one at Calaveras Avenue south of Palmer Avenue. Together these tanks have a capacity of more than 5 million gallons.

B-2 POLICE PROTECTION

Setting

The Coalinga Police Department is responsible for the enforcement of all local ordinances and State and Federal statutes within its city limits and for the prosecution of violators. The Department station is located in the center of the City on Highway 33/198 at 240 North 6th Street and a planned expansion on an adjacent property began in 1994.

Police department patrol activities are not organized around a beat system. The Department is staffed with 16 full-time sworn officers, including the chief, plus five dispatchers (1993).

The City's Police Department maintains a mutual aid agreement with the Fresno County Sheriff's Department for additional services. The Department also

offers several police-sponsored community outreach programs to its residents. All services of the department are supported by the City's General Fund.

Police Protection Analysis

Additional growth anticipated in the General Plan has the potential to increase the amount of patrol requirements and the response demand of the Police Department. Continued growth throughout the planning area will require additional department manpower in order to provide adequate service and protection. Because the specific type and timing of future development is unknown, the precise amount of increased police protection necessary cannot be determined. Needs assessment programs are undertaken annually and submitted to the City Council for fiscal review. The General Fund or other sources such as impact fees will fund any additional needs which the City determines.

B-3 SCHOOLS

Setting

The city is within the Coalinga-Huron Unified School District; the District is also responsible for schools within the Huron sphere of influence and county rural areas (over 500 square miles of farm and rangeland). All of the District's facilities are located in Coalinga, except an elementary and a continuation high school in Huron. The District includes five elementary schools, one middle school, one senior high, and two continuation high schools. The District is considering construction of a new middle school on District-owned property adjacent to the High School or in the City of Huron. This school is expected to be completed by 1997. The current middle school may then be converted to accommodate additional high school students.

With the exception of the continuation high school, all the schools presently are (October, 1993) operating within their available capacity.²

According to the District, continued residential growth in the Coalinga area would result in student overcrowding and in the need to construct new school facilities. The District adds that there are insufficient funds to build new schools.

Schools Analysis

Implementation of the General Plan will encourage development and growth in both the residential and non-residential sectors. Residential development will

²Coalinga-Huron Unified School District Five-Year Facilities Plan and Findings, 1993.

increase the permanent population of the city while non-residential development will increase the employment base within the District's boundaries.

The School District issued its Five-Year Facility Plan and Findings which summarizes existing District planning and demographic information and addresses District student housing policies. The Plan also summarizes financial and technical requirements associated with providing additional District facilities and with providing for quality educational delivery systems. Projections for the District through school year 1998/99 show a four to five percent average annual increase in enrollment. The District is unable to reasonably accommodate these additional students at their existing facilities.

Increased residential development within the next five years may generate sufficient demand for an additional elementary school.

There are a number of potential funding sources for new school facilities, including state funds, bond measures, and development fees. Decisions between the City and the School District regarding local funding sources have been an intense subject over the past two years. Disputes have arisen in that the School District believes it has not received adequate funding (i.e., school developer fees) to keep pace with new development. On the other hand, enabling legislation which clearly outlines the role of a city in supplementing school funding above statutory limits remains unclear. Over the past several years the courts have attempted to clarify this issue; however, many shades of gray still exist. In the meantime, school districts throughout the state have become more aggressive in using the General Plan and land use entitlement process as a means of obtaining additional funds for new school construction.

On September 13, 1994, the Coalinga-Huron Unified School District submitted a document to the City titled "Public School Facilities Component," dated July 25, 1994. The report contains considerable information on School District plans and policies.

The City recognizes the pressures on the school district given a burgeoning school population; the lack of state responsibility to fund schools properly; and the lack of adequate enabling legislation which defines the role of local government to meet school funding needs.

City staff and the Planning Commission have carefully reviewed this document. A modified version is included as the remainder of this section. The City's intent is to use this version of the school districts submitted as a focal point for ongoing discussion. The General Plan will be updated when a mutual agreement concerning plan, policy and funding between the City and District is achieved or when progress towards such agreement is reached.

The modified version of the Public School Facilities Component follows.

Public School Facilities Component (7/25/94)

GOAL: To provide for adequate public school facilities which serve as a neighborhood and Community focus and which maintain a quality learning environment for the City of Coalinga's residents as the City population increases.

(1.) Introduction

The Coalinga-Huron Unified School District ("District") serves students living in Coalinga, Huron and portions of Fresno County and Monterey County. The District covers approximately 900 square miles, and has become a growth District in the San Joaquin Valley.

At the present time, the elementary school facility in Huron serves students in grades K-6, while the Coalinga area elementary schools serve students at various grade levels, in the following school facilities: Bishop, Cheney, Dawson, and Sunset Elementary Schools.

Coalinga Middle School students, grades 7-8, are currently housed in facilities which are required to share instructional spaces and core facilities with Coalinga High School, grades 9-12. All District students in grades 7-12 attend Coalinga Middle, Coalinga High, Cambridge Continuation, or Huron Continuation High School, respectively.

The District has experienced steady growth in enrollments during the past five years. This growth is expected to increase over the next ten years to a growth rate of approximately 4+% per year. The growth is projected to result from:

- a) Pending and planned residential developments in the cities of Coalinga and Huron and in the unincorporated areas.
- b) Buildout of a new Industrial Park in the City of Coalinga.
- c) Proposed annexations to the City of Coalinga
- d) Construction of hospital and medical facilities, and the opening of a State prison facility in the Pleasant Valley area.

As set forth in the District's Five-Year Facilities Plan, to provide school facilities to house projected student enrollments, the District needs to:

- a) Construct at least one new elementary facility in the eastern area of the City of Coalinga.

- b) Consider to either permanently house all future middle school students at the existing facilities or consider other alternative sites for the construction of the new middle school facilities.
- c) Refurbish existing facilities.

The District relies on developer fees to provide approximately one-third of the construction costs for new or upgraded school facilities. State financing may provide another 50 percent, only if future State-wide bond financing is approved by the electoral.

The objectives and related policies and programs set forth below provide mechanisms which will assist the school district in its efforts to meet this future demand for school facilities.

(2.) Neighborhood Integration

- A. Objective: To provide public schools which are physically and functionally integrated with their surrounding neighborhoods and community at large.
- B. Intent: Schools are an important part of any neighborhood. In addition to their central educational role, they serve as a place for meetings, special programs, after-school play, soccer and little league games, and precinct voting. How well the school functions in these various roles depends very much on the school's location with respect to other community uses and how accessible it is. However, all too often the location of schools is the consequence of negotiated agreements during development approval without regard to the full range of design and locational opportunities in the community.
- C. Policies
 - 1. Schools shall be planned as a focal point of neighborhood activity and interrelated with neighborhood retail uses, parks, greenways and off-street paths whenever possible.
 - 2. Elementary and junior high schools shall be planned adjacent to neighborhood and community parks whenever possible and designed to promote joint use of appropriate facilities.
 - 3. Elementary schools shall not be located along arterials and thoroughfares to facilitate the transportation of students.
 - 4. School facilities should link with planned bikeways, and pedestrian paths wherever possible.

D. Implementation Measure:

1. Require development plans to show the location of planned schools and to reflect General Plan policies regarding school and neighborhood design.
2. Consult with public school facility planners during the creation or update of Specific Plans.
3. Coordinate operation and maintenance of joint use facilities by agreements between the affected parties. (i.e. Department of Parks and Recreation, Local Park Districts and School District).

(3.) School Facility Levels

A. Objective: Facility levels equal to state standards for school enrollment and school site size for all of Coalinga's schools.

B. Intent: The state has established minimum standards for facilities, and although the state has the primary role of seeing that school districts achieve these standards, the City should reinforce its support of service level standards where mitigation of school impacts is necessary. Moreover, the subdivision review process frequently involves decisions regarding the dedication or reservation of school sites. The following policies provide specific direction, including assistance to the District in acquiring future school sites.

C. Policies:

1. Land dedications or reservations for schools should meet state guidelines for school parcel size. Where more than one owner or development project is involved, there shall be appropriate assurances and conditions to assure that requisite acreage can and will be assembled to meet facility site requirements.
2. Specific Plans shall include consideration of the need and potential location of future school sites based upon adopted school district facilities plans and criteria.

D. Implementation Measures:

1. Address the need for reservation of school sites in all residential subdivisions.
2. Develop procedures to incorporate school site location and acquisition and part of the Specific Planning process.

(4.) School Facilities Mitigation

- A. Objective: Construction and/or renovation of schools to keep pace with urban growth.
- B. Intent: Inadequate school construction is the key roadblock to achieving the goal of providing a quality learning environment for the area's residents. The City's preferred approach is to focus on supplemental funding. The City will pursue political and possibly legal opportunities to argue for greater state financing responsibility.

The following policies recognize the City's commitment to mitigate impacts of development on school facilities. The intent of the policies below is to require the District to meet Priority Level One status of the state bond program prior to requesting supplemental mitigation.

- C. Policies:
 - 1. Supplemental mitigation fees may be established by the City Council provided they find that supplemental fees are critical and necessary to meet the facility funding needs of the District and that traditional methods of school financing are not adequate.
 - 2. Support state legislative efforts to secure additional state funding for school construction and ensure maintenance of District priorities for funds in the state school bond program.

(5.) School Construction Schedule

- A. Objective: New School facilities shall be constructed and completed timely with the pace of construction of new residential and commercial projects.
- B. Intent: The City is desirous of residential growth occurring in concert with new or expanded school facilities to accommodate new students. The following policies establish this basic principle within the practical context of timing for growth and facility construction. If plans and financing for necessary school facilities are in place, they should not present formidable obstacles. Without adequate funding, schools cannot be constructed in a timely manner. Policies throughout this plan affirm the City's commitment to requiring essential services prior to or along with the granting of entitlements for new growth.
- C. Policies:
 - 1. Residential projects proposed prior to completion of planned school facilities shall include phasing conditions tied to school capacity,

provided that the school District shall proceed in good faith to complete the timely construction of needed facilities prior to completion of the subject residential development. Development agreements may be appropriate to confirm reciprocal obligations.

2. Residential rezone and general plan amendments shall include findings pertaining to school facility needs to accommodate projected students consistent with service level standards to serve the project or that the project includes phasing conditions to ensure coordination of residential construction and school construction.

D. Implementation Measures:

1. Coordinate City, and District development monitoring efforts to ensure that the District has early knowledge of all proposed residential projects, the ability to project combined effects of projects on school attendance, utilize consistent analytical approaches, and effectively convey information regarding the ability to accommodate new students to the City Planning Departments.
2. Develop conditions and development agreement provisions to implement residential phasing policy.

C. INFRASTRUCTURE

C-1 CIRCULATION

Setting

This section describes traffic issues affecting the city including an overview of traffic and circulation conditions, of level of service conditions, and of potential constraints.

Traffic and Circulation Conditions

The street system in Coalinga is composed of arterials, collectors, and local streets. The network of streets has a general pattern of arterial streets at approximately one mile intervals with collectors at one-half mile intervals. The roadway plan for the city is shown on Map 4 in the General Plan.

Regional access to the city is provided by Interstate 5 and State Highways 33 and 198. These highways are identified on Figure 2 of the General Plan.

The existing network of streets in Coalinga is characterized by several unique features. First, the original city grid of streets in the commercial core runs diagonal to a surrounding north-south grid, resulting in multiple off-set intersections on Washington, Sunset, Polk, and Hayes Streets. Second, many streets in Coalinga are extremely wide with "valley" gutters at intersections, posing both opportunities and constraints. Finally, constraints to future growth include two narrow bridges near Phelps/198-33 and Warthan and Polk Streets.

Existing transit service includes a demand-response system which operates within the city, a commuter bus that provides service between Coalinga, Avenal, and Huron and is timed to meet shift changes at the state prisons, a scheduled commuter bus that runs between Coalinga and Fresno, and a shuttle bus that runs between the junior college campus and learning center in Lemoore.

Existing PM Peak Hour Level of Service

Intersection turn movement counts were performed in October, 1993 at selected intersections to obtain the current levels of service on city roadways. All of the study intersections were found to operate at average or above average Level of Service (LOS) in the PM peak hour. The intersections at Cherry/Elm and Van Ness-First/Elm both have left turn movements from the minor street approaches which operate in the LOS C range. All other study intersections experience uncontested operation in the LOS A to B range. The existing LOS at the study

intersections indicates that traffic circulation in and around the City operates predominantly under free flow conditions.¹

Potential Constraints

There are several unique components of the transportation network in Coalinga that pose potential constraints to future growth. These components are identified in the following text.

Bridges

Two existing two-lane bridges on the two major approaches to Coalinga represent constraints to growth unless improvements are made. The first is the bridge on State Route 198/33 near Phelps Avenue on the north side of town. This bridge has a current peak hour volume of approximately 445 vehicles per hour. According to the Highway Capacity Manual, the threshold for a two-lane rural highway operating at LOS C or better is 650 vehicles per hour.

The second bridge is located on Polk Street at Warthan Creek. Currently, peak hour volumes are about 553 vehicles per hour. Therefore, the reserve capacity here is less than 100 vehicles per hour which could be exceeded by future traffic.

Off-Set Intersections

Partially due to the older diagonal street pattern in the commercial core surrounded by a north-south oriented grid system, there are numerous off-set or dog-leg intersections in Coalinga. This type of intersection represents a constraint in that it has a lower traffic capacity than aligned intersections, impacts the capacity of the intersecting streets, and represents a safety concern and a source of confusion for visitors to Coalinga.

Valley Gutters

Valley gutters represent a constraint because they require vehicles to slow considerably, regardless of stop signage. While this is probably a benefit on residential streets because it slows traffic, on collector or arterial streets it can act as an impediment to smooth traffic flow.

¹City of Coalinga, Existing Traffic Conditions Report, December 1993, Fehr & Peers Associates, Inc.

Through Traffic Patterns

With two state highways (198 and 33) traversing Coalinga, external bypass or through traffic, will consume capacity for Coalinga growth, and increased through traffic may impact the quality and character of some neighborhoods. However, this additional through traffic may also be viewed as an important economic stimulus for the City's retail business.

Circulation Analysis

See Appendix B, 1994 Traffic Report.

C-2 UTILITIES

This section describes utilities services and issues provided to the City. The utilities described in this section include the major infrastructure systems including water sources and distribution, sewage collection and treatment, and natural gas.

WATER

The potential impact of increasing development on the City's entire water system prompted the City to develop a Water System Master Plan. The Water System Master Plan, completed in February, 1991 by Boyle Engineering Corporation, evaluates the City's water distribution system and identifies future improvements. The following discussion summarizes information contained in the Water System Master Plan.

Setting

Water Source

All potable water utilized by the City is imported; no local sources are used. Water destined for Coalinga flows southerly in the Central Valley Project California Aqueduct and then into the Coalinga Canal. In addition to furnishing water to the residents and businesses of Coalinga, the City also provides treated water to various oil company users.

In order to obtain domestic water, the City entered into a contract with the United States Department of the Interior, Bureau of Reclamation providing for water service to Coalinga. As originally drafted, the Bureau contract obligates the Bureau to furnish Coalinga up to 10,000 acre-feet per year (AFY) of "firm" (reliable supply) water. However, the terms of the contract also limit the amount of firm water available based on average use during the immediately preceding five years. Overall water consumption has averaged 5,000 acre feet per year. Because of the ongoing drought, and changes in Bureau of Reclamation water policy, that is the correct amount available to Coalinga.

Groundwater

Local groundwater is of poor quality and contains high concentrations of sodium, sulfates, and total dissolved solids (TDS). This condition occurs for groundwater at depths of 500, 1,000, and 1,500 feet; therefore, groundwater is not considered a viable source of potable water for the Coalinga planning area. Even for crop irrigation, groundwater is considered only of "marginal acceptability."

Systems Overview

Water destined for Coalinga flows southerly in the Central Valley Project California Aqueduct and then into the Coalinga Canal. A raw water pump station lifts the Coalinga Canal water to the City's water treatment plant. After the water flows through the City's conventional filtration treatment plant, a filtered water pump station lifts the water to the 2.8-million gallon (MG) Palmer Avenue Reservoir. The water then flows through several miles of 27-inch and 24-inch transmission mains to the 7.6-MG Derrick Avenue Reservoir. After leaving the Derrick Reservoir, the water then flows through a 30-inch transmission main into the Coalinga distribution system.

In addition to furnishing water to the residents and businesses of Coalinga, the city also provides water to various oil company users. Water for the oil companies is extracted at two principal locations from the transmission system: upstream from the Palmer Reservoir, and upstream from the Derrick Reservoir.

The City also serves several customers east of Coalinga through two "Rural Systems." The rural systems are comprised of a 10-inch line in Phelps Avenue extending easterly from Coalinga to Calaveras Avenue, an 8-inch line extending southerly to Calaveras and Jayne Avenue, easterly in Jayne Avenue to Alpine Avenue, and then a 6-inch line extending southerly in Alpine. Maps 7, 8 and 9 of the General Plan Part I show the major components of the water system.

Surface Water Treatment Plant

Coalinga's water filtration plant came on line in April, 1972 and was upgraded in 1993. The plant's nominal capacity is 12 million gallons per day (MGD) average flow. In the past, the plant has performed well, meeting state and federal drinking water regulations.

Filtered Water Pump Station

The filtered water pump station which purifies water for drinking has an operational capacity of 16 million gallons per day.

Storage

Coalinga's existing water system includes the following five storage reservoirs located at different sites outside the city.

- **Palmer Reservoir.** Located adjacent to Palmer Avenue, this reservoir has a capacity of 2.8 MGD. This reservoir receives the pumped filtered water from the water treatment plant.

- **Calaveras Reservoir.** Located adjacent to Calaveras Avenue, this reservoir has a capacity of 5.0 MGD. Water flows from the filtration plant to the Calaveras Reservoir and then to the Pleasant Valley Prison.
- **Derrick Reservoir.** Located adjacent to Derrick Avenue, the Derrick Reservoir has a capacity of 7.6 MGD. Water from the Palmer Reservoir flows to the Derrick Reservoir and then into the city.
- **Oil King Reservoir.** Located east of Highway 33, approximately three miles north of Palmer Avenue, this reservoir has a capacity of 0.5 million gallons. This reservoir serves oil company customers exclusively.
- **Northwest Reservoir.** Located east of Derrick Avenue, approximately three miles north of Gale Avenue, the Northwest Reservoir has a capacity of 0.2 MGD. Like the Oil King Reservoir, this reservoir is for the exclusive use of oil company customers.

Distribution System

Water is piped from the Derrick Reservoir through 30-inch, 24-inch, and 18-inch water transmission mains into the Coalinga water distribution system. The distribution system consists of a network of water mains ranging in size from four inches to 14 inches. There are approximately 2,750 service connections throughout the city (1991).

Water Analysis

This section analyzes future water demand and projected systems improvements as described in the Water System Master Plan.

Future Water Demands

Development and population growth occurring in accordance with proposed General Plan land use policy will result in increased demand for domestic water.

The current allotment from the Coalinga Canal, by agreement with the Bureau of Reclamation is 10,000 AFY. Probably, this amount will be adequate until approximately the year 2018 under current planning assumptions. This aspect of Coalinga's water system supply will require scrutiny when the Coalinga/Bureau water contract is renegotiated in 2007. Table D-3 in the Water Conservation section describes city water demand.

Storage Requirements

The existing storage available to the City consists of the Derrick and Palmer reservoirs, with a total combined capacity of 15 MG. It is assumed that the Northwest and Oil King reservoirs are dedicated as storage for the oil

companies and that the correctional facility will have a local storage facility of its own.

Construction in 1993 of the new 5.0 MG reservoir on Calaveras Avenue, as part of the project to serve the prison, provides the additional necessary storage to the year 2010. This reservoir eliminates the excessive pressures in lines at Phelps and Calaveras and provides a secondary source of emergency storage to the Coalinga system.

Construction of another 7.6-MG of storage will probably be required around the year 2010. This reservoir should be located south of Coalinga near the Merced Avenue alignment.

Distribution System

The City's water distribution system consists of 24- and 30-inch transmission lines, and 6- and 14-inch distribution lines. This system is capable of supplying peak hour needs without excessive losses and can deliver fire flows to main lines. All major components of the water distribution system necessary to accommodate additional growth were completed in 1994.

SEWER SERVICE

Setting

The City of Coalinga controls and administers the wastewater system for both domestic and industrial sewerage. Effluent is collected and transported through City-owned lines to the existing wastewater treatment facility, located on the east side of the city between Polk Street and Phelps Avenue along the Stanislaus Alignment. The facility has been upgraded to a secondary treatment plant, allowing it to process additional effluent and to generate cleaner wastewater.

Maintenance of the City sewer system is financed by sewer charges. Extension of sewer mains to new development is paid for by the developer.

As of December 1993, the City was investigating means for further improving the operation and capacity of the wastewater treatment plant. Improvements under consideration include a new screening device, improved scum handling facilities, and a trickling filter process to replace the existing aerated lagoons. The trickling filter will expand the plant's treatment capacity from 1.34 MGD to 2.0 MGD. (Ref-Wastewater report).

Sewer Service Analysis

Additional development anticipated under proposed General Plan land use policy will increase sewage flows and treatment capacity requirements.

Impacts on local collection will depend on the extent of development within a given area and will be determined at the individual project level at the time of individual project approval. In areas where development levels increase or extend into presently unserved areas, system upgrades will be necessary.

The existing growth pattern in Coalinga and the present location of the wastewater treatment plant concerns City staff. As development appears to grow toward the east (and toward the treatment plant), the plant may become less isolated and eventually hinder new residential development. Possible relocation sites for the treatment plant may include: (1) the intersection of Calaveras Avenue and Phelps Avenue, (2) the intersection of Calaveras Avenue and Jayne Avenue, and (3) east of the industrial park in Section 4, south of Jayne Avenue.

NATURAL GAS

Setting

The City of Coalinga is one of only three local jurisdictions in California that owns and operates a natural gas distribution system. The City has over 35 miles of gas lines which it upgraded substantially after the 1983 earthquake. Between 200 and 210 million cubic feet of gas per year is distributed to 3,100 customers.

Beyond the City's corporate limits, PG&E provides natural gas. Two gas mains are located within the vicinity. One line runs parallel along the west side of Interstate 5. Another main is located approximately three miles to the north of Jayne Avenue, dead-ending from the northeast at the intersection of Calaveras Avenue and Tornado Avenue.

Natural Gas Analysis

Continued growth will increase natural gas demand over existing conditions. Natural gas demand for commercial and industrial uses will vary depending on the type of energy systems incorporated into the building design and on the degree of usage as a primary energy source. Residential requirements can also vary depending on building size, building materials and household size.

Buildout under the General Plan is expected to include 6,700 dwelling units and nearly 5.2 million square feet of non-residential development in the commercial core.

Although an increase can be expected, Coalinga is a relatively small city and this increase will not substantially impact existing resources.

New development in accordance with proposed General Plan land use policy may require some local upgrades and/or improvements to the existing service lines.

D. RESOURCE CONSERVATION

D-1 NATURAL SETTING

Coalinga is located at the base of the coast mountain ranges on the western side of California's Central Valley. It is approximately 100 miles north-northwest of Bakersfield. Before the arrival of the Spanish in the 18th century, the vegetation of the area was characterized by perennial grasslands with scattered oaks near the foothills. With the introduction of cattle and farming activities, much of this native grassland either has been destroyed by conversion to croplands or has been replaced by introduced annual grasslands, which are better able to withstand intense grazing pressures.

The City is situated at the confluence of Los Gatos and Warthan Creeks. These stream channels run along the northeast and southeast edges of town, partially defining the boundaries of the urban area. Vegetation along the stream channels from their headwaters to Pleasant Valley varies considerably. There are long reaches with no obvious, obligate riparian vegetation, occasional stands of large cottonwoods, marsh-like reaches with rushes and other small plants but no trees, and sparse to dense stands of small and large tamarisks. Cottonwoods and mesquite are native to the area. Another common species, tamarisk, is an invasive, introduced plant that is an aggressive competitor with native vegetation, and provides little value as habitat for native wildlife.¹

Pleasant Valley originally supported large herds of pronghorn antelope and tule elk; however, these species are no longer present. Mule deer, kit fox, wild boars, coyotes, bobcat, and badgers inhabit the surrounding hills. California ground squirrels, black-tailed jackrabbits, and desert cottontails are abundant.

Turtles, small fish, frogs, and aquatic insects are observable in stream reaches with surface water in the canyons above town. Some of these creatures probably wash down during high flows and become temporary residents near the city until the streams dry up.

¹ City of Coalinga, Management Plan for Warthan Creek and Los Gatos Creek, Natural Resources Services, Redwood Community Action Agency, 1990.

Setting

In recognition of the many sensitive plant and animal species known within the Pleasant Valley area, the City of Coalinga, Fresno County, and several other organizations and agencies cooperated in the preparation of a Habitat Conservation Plan (HCP). The HCP is intended to provide for compliance with federal and state Endangered Species Acts and protect rare and endangered species.²

The HCP is being undertaken through a joint powers agreement by the City of Coalinga, the Coalinga Redevelopment Agency, Fresno County, the Coalinga-Huron Recreation and Park District, and the Coalinga-Huron Unified School District. Plan preparation is in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). To allow the take of federally-listed threatened or endangered species or their habitat, the USFWS must first issue a Section 10(a) permit. A habitat conservation plan is a required component of a Section 10(a) permit application. For state listed species, the CDFG must issue a Section 2081 management authorization. The HCP is intended to provide the foundation for those permit activities.

In 1991, a team of biologists surveyed the Pleasant Valley HCP area from a helicopter. During this aerial survey, the biologists searched for extensive suitable habitat for sensitive species, which could be designated as Focused Survey Areas. Focused Survey Areas are defined as large contiguous expanses of relatively undisturbed land dominated by natural communities, rather than by urban uses, heavily developed oilfields, or intensely cultivated agricultural land. In this context, lightly disturbed oilfields (where most of the acreage remains grassland or scrub vegetation) and extensive agriculture (grazing land) qualify as natural communities. A total of approximately 55 square miles in five distinct areas was selected.

It should be noted, however, that even a "low ranking" area may be occupied habitat for sensitive species. The five Focused Survey Areas are:

- Anticline Ridge,
- Gujarral Hills,
- Warthan Creek,
- Jacalitos Canyon, and
- Kettleman Hills.

² City of Coalinga, East Coalinga Annexation Draft Environmental Impact Report, Land Use Associates, 1992.

Each of the Focused Survey Areas were surveyed during the late spring and summer of 1991 and 1992. The field data forms are on file with the City of Coalinga, U.S. Fish and Wildlife Service in Sacramento, and the California Department of Fish and Game in Fresno.

Plant and Animal Sensitivity

Plant communities are considered "sensitive" by various resource agencies. Plant communities may be regarded as sensitive for one or more of the following reasons: 1) they may provide habitat for rare plants or animals, 2) there may have been extensive historic and ongoing losses of acreage throughout the region, or 3) they may be considered important elements of local aesthetic value and natural heritage.

The State Department of Fish and Game (CDFG) classifies sensitive species into several groups. These classifications include: candidate, rare, threatened, and endangered. A "candidate" species is one that the Fish and Game Commission (CFGC) formally has noticed as being under review by the Department of Fish and Game to determine whether listing it as threatened or endangered is warranted, or when it is the subject of a proposed rulemaking by the Commission to list as threatened or endangered.

A native California plant is "rare" when it is in such small numbers throughout all or a significant portion of its range that it may become endangered if its present environment worsens.

A native California bird, mammal, fish amphibian, reptile, or plant is "threatened" when, although not presently facing extinction, it is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts. Any animal listed as "rare" by the Commission on or before January 1, 1985 is a "threatened" species.

A native California bird, mammal, fish, amphibian, reptile, or plant is "endangered" when it is in serious danger of becoming extinct throughout all, or a significant portion of, its range due to one or more causes, including loss of habitat, change of habitat, overexploitation, predation, competition or disease.

A list of sensitive plants and animals known from the Pleasant Valley Area are listed in Tables D-1 and D-2.

Focused Survey Areas

A brief discussion of plants and animals found within the Focused Survey Areas follows (Ref-HCP)

Anticline Ridge. The Anticline Ridge is designated as Focused Survey Area 1. It is located in the northern portion of the HCP area.

Valley saltbrush scrub and non-native grasslands are the two natural communities found in this Focused Survey Area. Two populations of forked fiddleneck were identified.

Individual blunt-nosed leopard lizards were seen, and the blunt-nosed leopard lizard scat was present at five locations. San Joaquin kit fox scat was also present. California horned lizard sign and scat was found. American badger dens and diggings were observed in sections at four locations.

Guijarral Hills. The Guijarral Hills are designated as Focused Survey Area 2. This area is located in the east central part of the HCP .

Plant communities identified in this area include valley saltbrush scrub, non-native grasslands, and tamarisk scrub. One population of Hoover's wooly-star, three populations of San Joaquin wooly-threads, and one population of recurved larkspur were also identified.

A blunt-nosed leopard lizard was seen and blunt-nosed leopard scat was present at three locations. A San Joaquin kit fox was seen during night spotlighting for sensitive owl species. Known San Joaquin kit fox dens (along with fox scat and prey remains) were discovered. San Joaquin kit fox scat was also present. American badger diggings were observed as well as a burrowing owl.

Warthan Creek. Warthan Creek is designated as Focused Survey Area 3. It is located in the west central part of the HCP.

Plant communities present include valley saltbrush scrub, non-native grasslands, and tamarisk scrub. One population of Hoover's wooly-star was discovered.

Jacalitos Canyon. Jacalitos Canyon is designated as Focused Survey Area 4. It is located in the southwestern portion of the HCP.

Natural communities found in this area include valley saltbrush scrub, non-native grasslands, wildflower fields, and great valley cottonwood riparian forest. This is the only survey area to contain wildflower fields and great valley cottonwood riparian forest. Sensitive plant species found in this area include one population of forked fiddleneck, eight populations of Hoover's wooly-star, and three populations of San Joaquin wooly-threads.

With regard to sensitive animals, one burrowing owl was observed. Evidence of the San Joaquin antelope squirrel included burrows and observations. A known San Joaquin kit fox den was discovered along with tracks and scat.

TABLE D-1
SENSITIVE PLANT SPECIES WHICH COULD OCCUR
WITHIN THE HCP AREA

Scientific Name	Common Name	Status/1		
		CNPS	CDFG	FWS
<i>Amsinckia furcata</i>	Forked fiddleneck	1B	—	C2
<i>Atriplex cordulata</i>	Heart-leaf saltbrush	1B	—	C2
<i>Atriplex joaquiniana</i>		1B	—	C2
<i>Atriplex miniscula</i>		1B	—	C2
<i>Atriplex tularensis</i>	Bakersfield saltbrush	1B	E	C1
<i>Atriplex vallicola</i>	Lost Hills saltbrush	1B	—	C2
<i>Caulanthus californicus</i>	California jewelflower	1B	E	E
<i>Cirsium crassicaule</i>	Slough thistle	1B	—	C2
<i>Cordylanthus palmatus</i>	Palmate bird's beak	1B	E	E
<i>Delphinium recurvatum</i>	Recurved larkspur	1B	—	C2
<i>Eriastrum hooveri</i>	Hoover's wooly-star	1B	—	T
<i>Hollisteria lanata</i>	Hollisteria	—	—	C2
<i>Lambertia congdonii</i>	San Joaquin wooly-threads	1B	—	T
<i>Lepidium jaredii</i>	Jared's pepper-grass	?	—	RC2

Notes: Status\1 abbreviations are:

California Native Plant Society (CNPS) ranks are: 1A=plant presumed extinct in Calif., based on 1988 inventory; 1B=plants rare and endangered in Calif. and elsewhere; 2=plants rare, threatened, or endangered in Calif. but more common elsewhere.

California Department of Fish and Game (CDFG) ranks are: E=endangered; T=threatened; R=rare.

U.S. Fish and Wildlife Service (USFWS) ranks are: E=endangered; PE=proposed for endangered status; PT=proposed for threatened status; C1=candidate list; C2=candidate list.

Sources: Munz 1974; Munz and Keck 1972; Smith and Berg 1988; Abrams 1923-60; 1939; McMinn 1939; CNDDB 1988.

TABLE D-2
SENSITIVE WILDLIFE SPECIES WHICH COULD OCCUR
WITHIN THE HCP AREA

Common Name	Scientific Name	Status/1
<u>INVERTEBRATES</u>		
Vernal Pool Fairy Shrimp	<i>Branchinecta lynchi</i>	FT, SA
California linderiella	<i>Linderiella occidentalis</i>	SA
Morrison's blister beetle	<i>Lytta morrisoni</i>	FC2, SA
San Joaquin dune beetle	<i>Coelus gracilis</i>	FC1, SA
Ciervo aegialian scarab beetle	<i>Aegiala concinna</i>	FC1, SA
Redheaded sphecid wasp	<i>Eucerceris ruficeps</i>	FC1, SA
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T, SA
Hopping's blister beetle	<i>Lytta hoppingii</i>	FC2
<u>AMPHIBIANS</u>		
California tiger salamander	<i>Ambystoma tigrinum californiense</i>	FC2, CSC
California red-legged frog	<i>Rana aurora draytoni</i>	FC1, CSC
Foothill yellow-legged frog	<i>Rana boylei</i>	FC2, CSC
Western spadefoot toad	<i>Scaphiopus hammondi hammondi</i>	1R, CSC
<u>TERRESTRIAL REPTILES</u>		
Southwestern pond turtle	<i>Clemmys marmorata pallida</i>	CSC, FC1
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	SE, FE
California horned lizard	<i>Phrynosoma coronatum frontale</i>	CSC
Two-striped garter snake	<i>Thamnophis hammondi</i>	CSC, FC2
Northwestern pond turtle	<i>Clemmys marmorata marmorata</i>	FC2, CSC
<u>BIRDS</u>		
Northern harrier (breeding)	<i>Circus cyaneus</i>	CSC, MBTA
Cooper's hawk (breeding)	<i>Accipiter cooperi</i>	CSC, MBTA
Swainson's hawk (breeding)	<i>Buteo swainsoni</i>	ST, FC3, MBTA
Ferruginous hawk (breeding)	<i>Buteo regalis</i>	FC2, CSC, SA, MBTA
Golden eagle (breeding)	<i>Aquila chrysaetos</i>	CSC, MBTA
Prairie falcon (breeding)	<i>Falco mexicanus</i>	CSC, MBTA
Mountain plover (wintering)	<i>Charadrius montanus</i>	FC2, CSC, MBTA
Burrowing owl and burrow sites	<i>Athene cunicularia</i>	CSC, SA, MBTA
Long-eared owl	<i>Asio otus</i>	CSC, MBTA
Short-eared owl	<i>Asio flammeus</i>	CSC, MBTA
Le Conte's thrasher	<i>Toxostoma lecontei</i>	CSC, MBTA
Tricolored blackbird	<i>Agelaius tricolor</i>	FC2, CSC, MBTA
Western snowy plover	<i>Charadrius alexandrius nivosus</i>	PT, CSC, MBTA
Loggerhead shrike	<i>Lanius ludovicianus</i>	FC2, CSC, MBTA

TABLE D-2 (continued)
SENSITIVE WILDLIFE SPECIES KNOWN
FROM THE PLEASANT VALLEY AREA

<u>MAMMALS</u>		
San Joaquin antelope squirrel	<i>Ammospermophilus nelsoni</i>	ST, FC2
Giant Kangaroo rat	<i>Dipodomys ingens</i>	SE, FE
Short-nosed kangaroo rat	<i>Dipodomys nitratoideus brevinasus</i>	CSC, FC1
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	ST, FE
American badger	<i>Taxidea taxus</i>	CSC
Greater western mastiff bat	<i>Eumops perotis californicus</i>	FC2, CSC
Pacific western big-eared bat	<i>Plecotus townsendii townsendii</i>	FC2, CSC
San Joaquin pocket mouse	<i>Perognathus inornatus</i>	FC2, CSC

Notes: Status\1: SE=designated as endangered by the California Fish and Game Commission (CFG); ST=designated as threatened by CFG; FE=designated as endangered by the USFWS; FT=designated as threatened by USFWS; PE=proposed endangered by USFWS; FC1, FC2=designated as candidate by USFWS; FC3c=includes taxa that are now considered to be more abundant and/or widespread than previously thought; FSS=Federal (BLM, USFS) sensitive; 1R=recommended to become federal candidate; CSC= CDFG species of special concern; and SP=fully protected species in Calif.; SA=CNDDDB Special animal; MBTA=bird protected under the Migratory Bird Treaty Act.

Kettleman Hills. The Kettleman Hills are designated as Focused Survey Area 5. The hills are located in the southwestern part of the HCP.

Plant communities making up this area include valley saltbrush scrub and non-native grasslands. Sensitive plant species identified include one population of San Joaquin woolly-threads.

Known San Joaquin kit fox dens were discovered along with scat and tracks.

Coalinga Anticipated 20-year Development Area. The Coalinga development area is located near the City and represents the areas of anticipated development over the next 20 years. This area includes 16 sections (T20S R15E Sections 1, 3, 4, 20, 21, 23, 25, 27, 29, 33, 34, and 35; T20S R16E Section 32; and T21S R16E Sections 4 and 5). Most of the acreage in this anticipated development area does not qualify as natural habitat because it is either urban land, heavily disturbed oilfields, or intensively cultivated agricultural land. Only those areas that support natural communities (approximately 1,440 acres) were surveyed with the same level of intensity as the five Focused Survey Areas.

Natural communities encountered in this area include non-native grasslands and tamarisk scrub. No populations of sensitive plant species were encountered in this survey area. A southwestern pond turtle was seen in the pond in Section 33 (T20S R15E) during a bird survey. No other sensitive wildlife species were encountered.

Biological Resources Analysis

Although the Coalinga area is surrounded by several areas containing sensitive plant and animal species, the majority of anticipated development will occur in the City's sphere of influence, which includes areas adjacent to presently urbanized development. Other localized development will occur in areas where existing roadways or infrastructure is present or planned (i.e., new prison site, airport).

Based on the biological surveys taken as part of the HCP and other environmental studies, the 20-year development area has been determined to be non-critical.³ Although the area is non-critical in terms of habitat, certain areas such as Los Gatos and Warthan Creek channels could be important movement corridors for wildlife species of concern, particularly the San Joaquin kit fox. Consideration should be given to maintaining and/or enhancing these corridors as development progresses.

However, this increase in urbanization and resident population may encourage additional disturbance in outlying areas from foot traffic, bicycles, motorcycles, hunting, etc. During the preserve design phase of the HCP process, land of biological importance will be considered as elements of potential preserves. Establishment of preserves will limit activities in these areas that may be detrimental to plant and wildlife populations.

Impacts will likely be adequately mitigated if the terms and conditions of the HCP are complied with by each development. This must be guaranteed as a feature of the 10(a) permit.

³ Ibid

D-3 WATER CONSERVATION

This section identifies the various water users and projects future water demands for the city.

Water Users

Water users within the City have been identified in the Water System Master Plan, completed in February, 1991 by Boyle Engineering Corporation. The following discussion summarizes the information contained in the Water System Master Plan.

Most municipalities' water customers include residential, commercial, industrial, and institutional user groups. Coalinga water users include, in addition to the city users, oil company users. Chevron Oil is Coalinga's largest water customer, consuming approximately 340 acre-feet (AF) of treated water in 1994.

Approximately 1,430.4 acre-feet of treated water was supplied to the customers on the rural system in 1994, of which 1,037.5 acre-feet was for the prison. Approximately 3,208.4 acre-feet of treated water was consumed by the City itself in 1994. The total amount of treated water furnished in 1994 was approximately 4,999.3 acre-feet.

Coalinga also furnishes untreated water to two customers--the Harris Ranch feedlot and the Palvadero Country Club with a projected total consumption of approximately 360.5 acre-feet per year.

Future Water Demands

Development and population growth occurring in accordance with proposed General Plan land use policy will result in increased demand for domestic water. Residential development is expected to increase from an existing 3,400 dwelling units to approximately 6,700 dwelling units in the next 20 years. Total citywide population is expected to reach 16,300 persons at buildout.

In addition to increased residential water consumption, other non-residential projects requiring additional water supplies are proposed. One large-scale project, the proposed California Department of Corrections correctional facility, scheduled to be operational in the near future, will require approximately 1.02 million gallons per day (MGD) average day flow and a maximum day flow of 2.04 MGD (Ref. CDC EIR).

Other established large quantity water users include the oil companies. Review of the oil company water use records indicated that both the yearly average and maximum day demands vary considerably. Oil company maximum day demands over the past five years have ranged from 1.3 to 4.5 times average day use. Large maximum demands, if left uncontrolled, will have a negative impact

on the City's water treatment plant and could force premature or overexpansion of the plant. It is therefore recommended that the City limit the oil companies' abilities to extract excessive peak flows from the Coalinga system.

Table D-3 lists the projected annual water use for Coalinga through the year 2020. This table includes demand by the oil companies and the correctional facility.

The contract allotment from the Coalinga Canal by agreement with the Bureau of Reclamation is 10,000 AFY. As shown in Table D-3, this amount will probably be adequate until approximately the year 2018 under current planning assumptions. However, the terms of the contract also limit the amount of firm water available based on average use during the immediately preceding five years. Due to drought conditions and conservation measures, City water consumption did not increase markedly. The result was a reduction in the amount of firm water available in the early 1990s to 5,000 AFY. This will force the City to purchase water at much higher rates from other sources should the need arise. Additional groundwater is not available because of quantity limitations and poor quality.

Beyond the projected 20-year buildout of the City as envisioned in the General Plan, development will likely be linked to available water supply. Conservation programs implemented at the project level, such as installation of low flow showers and toilets, utilizing drought resistant landscaping, and public education programs can result in substantial water savings in the near term, thereby extending long-term water supplies. Water conservation programs can be established as voluntary or mandatory with passage of a city resolution.

TABLE D-3
PROJECTED WATER USE
(million gallons per day)

Year	Citywide	Prison	Oil Companies	Average Day	Maximum Day	Annual Use (AFY)
1994	3.040	1.020	1.784	5.844	11.423	6,546
1995	3.131	1.020	1.784	5.935	11.651	6,648
1996	3.225	1.020	1.784	6.029	11.886	6,753
1997	3.322	1.020	1.784	6.126	12.128	6,862
1998	3.422	1.020	1.784	6.226	12.377	6,974
1999	3.524	1.020	1.784	6.328	12.634	7,088
2000	3.630	1.020	1.784	6.434	12.898	7,207
2001	3.739	1.020	1.784	6.543	13.170	7,329
2002	3.851	1.020	1.784	6.655	13.451	7,455
2003	3.967	1.020	1.784	6.771	13.739	7,584
2004	4.086	1.020	1.784	6.890	14.037	7,717
2005	4.208	1.020	1.784	7.012	14.343	7,855
2006	4.334	1.020	1.784	7.138	14.659	7,996
2007	4.464	1.020	1.784	7.268	14.984	8,142
2008	4.598	1.020	1.784	7.402	15.319	8,292
2009	4.736	1.020	1.784	7.540	15.664	8,446
2010	4.878	1.020	1.784	7.682	16.019	8,605
2011	5.025	1.020	1.784	7.829	16.385	8,769
2012	5.175	1.020	1.784	7.979	16.761	8,938
2013	5.331	1.020	1.784	8.135	17.150	9,112
2014	5.491	1.020	1.784	8.295	17.549	9,291
2015	5.655	1.020	1.784	8.459	17.961	9,476
2016	5.824	1.020	1.784	8.628	18.385	9,665
2017	5.999	1.020	1.784	8.803	18.822	9,861
2018	6.179	1.020	1.784	8.983	19.272	10,062
2019	6.364	1.020	1.784	9.168	19.735	10,270
2020	6.555	1.020	1.784	9.359	20.212	10,484

Notes: Oil company use based on Chevron's 1990 schedule use plus 1989 actual use by other oil companies.

Maximum day based on peaking factors of 2.5 for the city, 2.0 for the prison, and 1.0 for the oil companies.

Source: City of Coalinga, Water System Master Plan, February 1991, Boyle Engineering.

D-4. SOLID WASTE

Setting

The City of Coalinga provides solid waste collection service. The waste is disposed of at the Coalinga Disposal Site situated on Alcade Road, one mile southeast of Coalinga near Highway 198. User fees finance the solid waste service. The disposal site is operated by the County of Fresno. Based on the present (1992) volume of 30 tons per day, the land fill has an estimated life span of 55 to 60 years.⁴

According to the Solid Waste Generation Study (SWGS) prepared for Fresno County, Coalinga generated 7,620 tons of solid waste in 1990. Of the total solid waste generated, 571 tons of solid waste were diverted from the landfill through buy-back centers, commercial collection, and yard debris composting activities. The residential waste accounted for 36% of the total waste stream. Commercial waste accounts for 16%. Industrial waste is 15%, and other wastes comprise 32%.

AB 939, the Integrated Waste Management Act, became law in California on January 1, 1991. The law created the California Integrated Waste Management Board whose role it is to review permits for landfills and closures, review recycling plans, and reduce the overall solid waste disposed of at landfills. AB 939 mandates that each city or waste management district prepare a "Source Reduction and Recycling Element" consistent with the objectives of source reduction, composting, and recycling. The act also requires that the solid waste disposed of at landfills be reduced by 25% by 1995 and by 50% by 2000.

The Coalinga Source Reduction and Recycling Element (SRRE) was developed in response to AB 939. Coalinga is already diverting 7.5% of its waste from its landfills. Coalinga's SRRE addresses its plan to divert an additional 17.5% and 42.5% to meet the 25% and 50% diversion goals. The SRRE includes four main components: source reduction, recycling, composting, and special waste. Each identifies existing diversion programs and examines, evaluates, and selects future diversion programs.

The overall goal of the SRRE is to divert 25% and 50% of Coalinga's waste stream by January 1, 1995 and January 1, 2000, respectively. To meet these reductions, the City must divert its yard debris and begin a composting program. The City had opted to place the composting program at the existing landfill site. However, the Fresno County Department of Public Works & Division of Resources has concluded that it is economically infeasible to have a composting

⁴City of Coalinga, East Coalinga Annexation Draft Environmental Impact Report, October 1992, Land Use Associates.

facility at this location. Without the composting facility, Coalinga cannot meet its 25% reduction under AB 939.

Any hazardous waste material used for industrial processing will be subject to requirements of the California Government Code (Section 65820.2[b]) and to policies of the Fresno County Hazardous Waste Management Plan.

Solid Waste Analysis

Buildout projections in the General Plan will add incrementally to the solid waste stream, thereby further decreasing the capacity and lifespan of the Coalinga landfill. Assuming each new household would generate approximately seven pounds of solid waste per day, the total potential increase in refuse attributable to the increased population would be about 11.2 tons per day.

Additional non-residential development outside the City's present jurisdictional boundaries but within the planning area would also contribute to the solid waste stream. The proposed prison site, located east of Highway 33 and south of Jayne Avenue would generate an additional 4 to 7.5 tons per day.⁵ The proposed Coalinga Airport would also generate additional amounts of solid waste requiring landfilling. Therefore, overall additional solid waste generation could reach somewhere between 15.2 tons and 18.7 tons per day.

Implementing the programs outlined in the City's SRRE by the year 2000, the City will reduce or divert 50% of the projected waste reaching the landfill. At this level of reduction and/or diversion, total wastes generated by the City at buildout will remain near present levels.

When the Coalinga landfill reaches capacity and closes, solid waste from the Coalinga area would be transported to the regional county landfill on American Avenue, 45 miles from Coalinga. The landfill has received permission to expand from its current size of 30 acres to 440 acres.⁶

The extent and amount of hazardous materials generated, if at all, will be determined by the types of uses developed on specific parcels. The specific type of future users is not currently known, therefore, the level of hazardous waste generated cannot be estimated. Any hazardous waste will be disposed of according to state and federal requirements.

⁵State of California Department of Corrections, California State Prison-Fresno County at Coalinga, March 1990, Michael Brandman Associates.

⁶Ibid.

D-5 MINERAL RESOURCES

This section describes the mineral resources present within the Coalinga area.

Available Resources

The mineral resources present in Coalinga include aggregate and petroleum. An aggregate recovery operation is located just north of the existing airport, and extensive petroleum recovery operations are present throughout the area.

Aggregate Resources

Aggregate resources are mined by Granite Construction, the only mining operator within the Coalinga Planning Areas. Although the State of California Division of Mines and Geology has not officially identified these aggregate resources on a Mineral Resource Zone (MRZ) map, this operation is important to City and to the County.

Any significant mineral resources, as designated by the Division of Mines and Geology, are overseen by the Surface Mining and Reclamation Act (SMRA). The SMRA, as enacted by the state in 1975 and amended thereafter, is designed to ensure proper reclamation of surface mining operations and to protect access to mineral resources considered to exhibit regional and/or statewide significance, particularly with respect to competing land uses. The California Division of Mines and Geology has adopted definitions for classification of the county's aggregate resources which are based on knowledge of the resource's presence and quality.

Local jurisdictions are advised by the California Division of Mines and Geology to manage their mineral resources toward the following goals:

- 1) Mineral land designated as areas of Statewide or regional significance should be protected from preclusive and incompatible land uses so that the mineral resources within these lands and areas are available when needed.
- 2) Surface mining within these designated areas should be controlled to assure that:
 - a) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.
 - b) The production and conservation of minerals are encouraged, while giving considerations to recreation, watershed, wildlife range and forage, aesthetic enjoyment, and other environmental factors.
 - c) Residual hazards to the public health and safety are eliminated.

Petroleum Resources

Oil production has long been a major industry in this area. Extensive oil recovery operations are located mostly to the north of the City, beyond the City's sphere of influence. The major oil producers include Chevron USA, Union Oil Company, Shell Production, and Santa Fe Energy. As shown in Figure 6, these oil companies have substantial land holdings surrounding Coalinga.

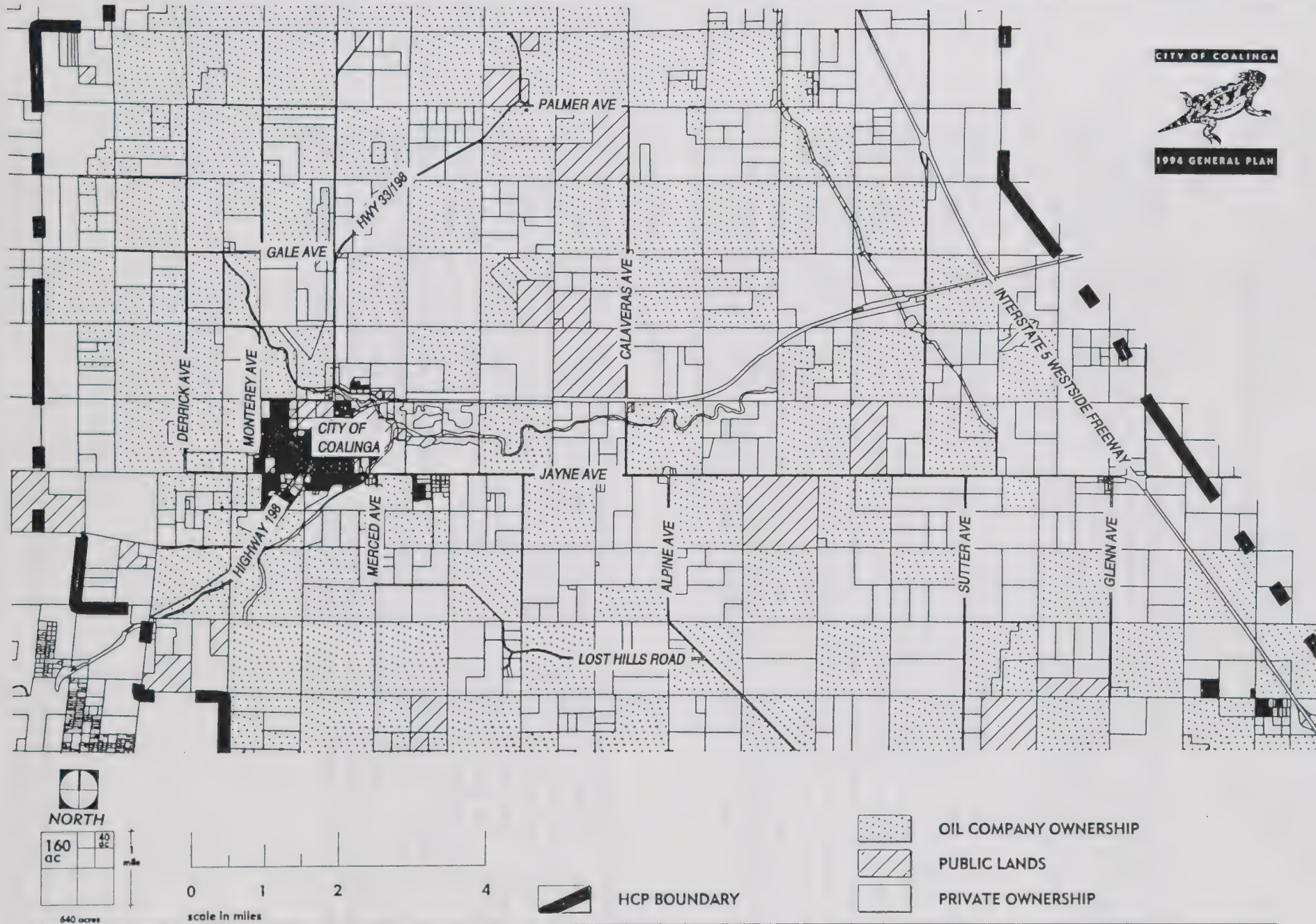
If any structure is to be located over or in the proximity of a previously plugged and abandoned well, the wells may require plugging to current Division specifications. Section 32108.1 of the Public Resources Code authorizes the State Oil and Gas Supervisor to order the reabandonment of any previously plugged and abandoned well when construction of any structure over or in the proximity of the well could result in a hazard. The cost of reabandonment operations is the responsibility of the owner of the property upon which the structure will be located. Furthermore, if any plugged and abandoned or unrecorded wells are damaged or uncovered during excavation or grading, remedial plugging operations may be required.

Any development must provide adequate clearance and access to wells for well workover equipment. The wells may require safety shut down devices. All wells and associated equipment within a project site should be enclosed by a 8-foot block wall with barbed wire on the inside at the 7-foot level. Suitable gates should be provided which are capable of allowing large workover equipment access into the well sites. The grade within the enclosed areas should be constructed so potential spillage will be confined to the enclosure. To restrict access, the placement of climbable landscaping around the perimeter of an oil field facility should be avoided.

Analysis

It is likely that aggregate recovery operations will continue to expand as demand for aggregate resources increases. The Coalinga Airport, which is to be relocated, is presently located adjacent to Granite Construction operations. The low level of development surrounding the airport will provide Granite Construction adequate expansion potential without creating land use incompatibilities.

Likewise, oil recovery operations are operating in areas that are not expected to become subject to land use incompatibilities.



Source: Fresno Co. Assessor's Office, 1993.

Figure 6
Ownership in the Pleasant Valley

Setting

The entire Coalinga area and surrounding portions of Fresno County include extensive agricultural acreage. Approximately 1,630 acres of agricultural uses are present within the City and surrounding Sphere of Influence. Extensive agricultural uses are present to the northeast, east and southeast of the city. Crops grown in this area surrounding the City are predominantly cotton and hardy row crops.

Much of the cultivated land is under Williamson Act contract. This Act allows cities and counties to establish agricultural preserves of at least 100 acres. Within the preserves, local governments can enter into contracts with landowners to restrict land to agricultural or open space uses for an initial ten-year period. The contract is renewed annually, unless the nonrenewal process is initiated by either party to the contract. Under nonrenewal, the contract gradually expires over the remaining 10-year period, with taxes incrementally rising to the full, unrestricted rate upon contract termination. Landowners, who enroll their land in contracts, receive preferential tax treatment based on the actual use of the land for agricultural purposes, as opposed to its market value. Map 11 in Part I of the General Plan identifies those parcels subject to land conservation (i.e., Williamson Act) contracts.

Agricultural Analysis

Development anticipated in the General Plan will be concentrated within the City's Sphere of Influence and vacant infill parcels within the commercial core. Because development will be limited to the City's Sphere of Influence, "leap-frog" development in outlying areas will be avoided, and prime farmland beyond the City's Sphere of Influence will not be adversely impacted. Approximately 485 acres within the City's Sphere of Influence will remain as agriculture, with approximately 1,770 acres subject to development. Of the land subject to development, approximately 36% is currently under Williamson Act contract. All of the future urbanization envisioned by the General Plan is within the City's Sphere of Influence. No urban development is projected or suggested by the General Plan within the area solely under Fresno County's jurisdiction. This "Area of Interest" totals 64% of the entire area addressed by the General Plan.

D-7 CULTURAL RESOURCES

Setting

Previous archaeological investigations and surveys in the immediate Coalinga area have identified archaeological sites to the west and southwest along both Los Gatos and Warthan Creeks. There is an additional site, FRE-49, located just east of the junction of Los Gatos and Jacilitos Creeks about three miles outside the City. Because sites are present in the vicinity, the possibility exists that undiscovered archaeological remains may be present in undeveloped or undisturbed areas.

In adjacent agricultural areas, the extensive disturbance that has occurred as a result of farming practices severely limits the probability of archaeological remains.

Cultural Resources Analysis

New development in accordance with proposed land use policy, especially on undisturbed parcels, may have an impact on previously undiscovered archaeological resources. In areas where extensive agriculture has occurred, the potential for finding significant archaeological resources is considered very remote.

Development should seek to avoid damaging effects on archaeological resources wherever feasible. Should such resources be discovered and avoidance prove not feasible, the importance of the site shall be evaluated by a qualified archaeologist. Mitigation measures included in Appendix K of the CEQA Guidelines shall be incorporated into the project should these conditions occur.

E. RECREATION AND OPEN SPACE

E-1 OPEN SPACE

Setting

The rural setting and geographic location of Coalinga offers extensive passive open space beyond the City. Although much of the land surrounding the City is in private ownership, the Bureau of Land Management (BLM) also manages substantial acreage. The stream corridors and watersheds of the Los Gatos and Warthan Creeks also offer open space opportunities for residents.

The two developed parks in the City are Keck Park and Olsen Park. Keck Park is a 17.5-acre community park which includes the Coalinga Community Center. This park is located on Jayne Avenue on the western edge of the city. Olsen Park is a 6.5-acre park located on Jayne Avenue east of the commercial core area. School district facilities also are available.

Open Space Analysis

Additional development occurring within the City's Sphere of Influence will incrementally decrease adjacent passive open space. However, development east of the city involves conversion of mostly agricultural lands which provide limited public open space and recreational opportunities. Surrounding BLM lands will still provide limited passive and active open space opportunities for residents.

With regard to developed open space, the projected increase in population will substantially increase the demand on the two parks and school facilities. Additional developed open space will be necessary to adequately serve the existing population. The General Plan has developed parkland standards to determine future parkland requirements.

E-2 TRAILS

Setting

The rural setting of Coalinga provides a variety of formal and informal trails for walking, bicycles, and equestrian users. Both Warthan Creek and Los Gatos Creek provide trails through the City and to outlying areas. The gravel road along the west side and the paved road along the east side of Warthan Creek are used extensively by bicyclists as is Los Gatos Creek. These creek trails have been designated as local bikeway routes. Other local bikeway routes include Highway 33 from Highway 198 east to Warthan Creek and Van Ness Avenue west of Highway 198. Regional bikeways serving areas beyond the City of Coalinga have been designated. These regional bikeway routes include Highway 198/33 and the Southern Pacific right-of-way along Phelps Avenue east to Huron.

Equestrian users also utilize Warthan and Los Gatos Creek trails. Large public land holdings outside the City provide additional equestrian riding opportunities.

Trails Analysis

Additional development will create a demand for an expanded trail network and will potentially limit the land available for establishing trails. The stream corridors are ideal locations for public trails for walking, jogging, and bicycling. Establishing a trail system in areas already in public ownership (the City and West Hills College) offer this opportunity. Other paths can be established if public access can be secured either through easements or title. The residential estate designation in the southern portion of the City provide opportunities to establish a comprehensive trail network through this section of the City.

Fresno County also has proposed additional bikeway routes through the City. The proposed Huron-Coalinga Bikeway Corridor is proposed as a dual use of Southern Pacific Railroad right-of-way. The high school age children from Huron go to school in Coalinga; West Hills College, shopping, recreation, and health care are all in Coalinga. The railroad right-of-way could provide bikeway linkage between Coalinga, Huron, Lemoore, Hanford and Visalia prior to bikeway implementation.

The U.S. Corps of Engineers has proposed the Los Gatos Creek Recreation Corridor Trail on the top of the levee at Warthan Creek Bridge north and west to Los Gatos Creek Bridge. This trail will be constructed in conjunction with a flood control project in Coalinga.

This proposed trail network is expected to adequately accommodate the projected increase in population without creating significant land use conflicts.

Stream corridors provide essential habitat for listed species living and crossing the urban area. HCP conditions will require that all future development adjacent to the creeks be set back 100 feet from the edge of the riparian vegetation or the top of the bluff. All developed public access will be outside the stream corridors and buffer areas in order for effects to be mitigated.

E-3 SPORTS

Setting

Recreation services are provided by the Coalinga-Huron Recreation and Park District. The District provides recreation services to the cities of Coalinga and Huron and to the rural areas. The District currently provides recreation services and sports for preschoolers through senior citizens. The proposed East Coalinga Annexation includes development of an 18-hole golf course.

Sports and athletic programs are offered at the elementary, high school and community college also.

Sports Analysis

Implementation of the General Plan will increase the City's population which will likely increase the demand for sports and athletic programs for the population. As population increases additional facilities including baseball diamonds, soccer fields, tennis courts, and the like will need to be provided.

E-4 CULTURAL FACILITIES

Setting

Although the City of Coalinga has a rich history dating back through the prehistoric record, Spanish settlement, and early oil and coal exploration periods, documentation of these periods is somewhat limited. Some archaeologic material has been found in the hills surrounding the valley, and some historic photographs and equipment document the oil exploration period. Essentially all of the early twentieth century brick buildings in Coalinga were destroyed by the 1983 earthquake. However, the Baker Oil Tool Company building remains and serves as the City museum.

With regard to present day cultural activities, the Coalinga-Huron Recreation and Park District has a recreation center in Coalinga and Huron which can be used for this purpose.

Cultural Facilities Analysis

Increased population in the City may result in an increased demand for cultural facilities. The type and extent of additional facilities will depend, in part, on the desires of the residents.

F. PUBLIC SAFETY

F-1 NOISE

Setting

Noise sources in Coalinga fall into three basic categories. These categories include: motor vehicle and farm equipment, aircraft, and stationary sources. Typical noise sources and associated noise levels are illustrated in Table F-1.

Existing Noise Sources

These sources include automobiles, trucks, and motorcycles. Motor vehicle noise is of concern because of its higher number of individual events which often create a sustained noise level and because of its proximity to areas sensitive to noise exposure.

Because of the relatively small amount of traffic in Coalinga, traffic-related noise in general is not a significant problem. However, based on the limited monitoring conducted in November 1993, the traffic mix includes an unusually high percentage of large trucks on the City's major roadways, including Polk Street east of Elm Avenue, Elm Avenue, and Phelps Avenue. It is possible that residences which are near the right-of-way of these streets may be exposed to noise levels exceeding 60 dB CNEL, however, noise monitoring resulted in levels too low to be shown on a noise contour map (see Appendix A 1993 Noise Study).

With regard to aircraft noise, a comprehensive noise assessment was undertaken as part of the planning for the new Coalinga airport. The future 60 and 65 CNEL contours (measurement criteria used in assessing land use compatibility with aircraft operations) do not extend past the airport boundaries. No significant adverse noise impacts are anticipated from the operation of the new airport.

Stationary noise sources generally are larger facilities such as power plants, sewage treatment plants, oil production, agricultural operations, heavy industrial uses, etc. No major heavy industrial uses are located within the City; however, agricultural operations occurring in the area generate noise from tractors, irrigation, and crop-dusting. The sewage treatment plant is located just east of the City. This plant is currently (1994) sufficiently far enough away from development to not create any significant noise problems.

Gravel mining operations are proposed to remain more than 1/2 mile from any current or potential residential development.

**TABLE F-1
NOISE SIGNIFICANCE**

	OVER-ALL LEVEL (Sound Pressure Level Approx. 0.0002 Microbar)	COMMUNITY (Outdoor)	HOME OR INDUSTRY (Indoor)	LOUDNESS (Human Judgement of Different Sound Levels)
130				
120	UNCOMFORTABLY LOUD	Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times As Loud
110		Turbo-Fan Aircraft @ Take-Off Power @ 200 ft. (118)	Riveting Machine (110) Rock and Roll Band (108-114)	110 dB(A) 16 Times As Loud
100	VERY LOUD	Boeing 707, DC-8 @ 6080 ft. Before Landing (106) Jet flyover @ 1000 ft. (103) Bell J-2A Helicopter @ 100 ft. (100)		100 dB(A) 8 Times As Loud
90		Power Mower (96) Boeing 707, DC-8 @ 6080 ft. Before Landing (97) Motorcycle @ 25 ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times As Loud
80	MODERATELY LOUD	Car Wash @ 20 ft. (89) Prop. Plane Flyover @ 1000 ft. (88) Diesel Truck, 40 mph @ 50 ft. (84) Diesel Train, 45 mph @ 100 ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times As Loud
70		High Urban Ambient Sound (80) Passenger Car, 65 mph @ 25 ft. (77) Freeway @ 50 ft. from Pavement Edge 10am (76 + 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner (70)	70 dB(A)
60	QUIET	Air Conditioning Unit @ 100 ft. (60)	Cash Register @ 10 ft. (65-70) Electric Typewriter @ 10 ft. (64) Dishwasher (Rinse) @ 10 ft. (60) Conversation (60)	60 dB(A) 1/2 As Loud
50		Large Transformers @ 100 ft. (50)		50 dB(A) 1/4 As Loud
40		Bird Calls (44) Lower Limit, Urban Ambient Sound(40)		40 dB(A) 1/8 As Loud
10	JUST AUDIBLE	[dB(A) Scale Interrupted]		
0	THRESHOLD OF HEARING			

SOURCE: Reproduced from Melville C. Branch and R. Dale Beland, "Outdoor Noise in the Metropolitan Environment", Published by the City of Los Angeles, 1970, p. 2.

Noise Sensitive Receptors

Residential uses, schools, and churches are considered the most common noise-sensitive land uses found in communities. The most noise sensitive land use in Coalinga is residential development. Residential development is considered especially noise sensitive because 1) considerable time is spent by individuals at home, 2) significant activities occur outdoors, and 3) sleep disturbance is most likely to occur in a residential neighborhood. The Coalinga Hospital located in the northeast part of town is also considered a sensitive receptor.

Noise Analysis

This section analyses the noise environment within Coalinga based on buildout projections contained in the General Plan. Noise impacts are generally divided into two categories: short-term and long-term. Short-term impacts are generally associated with temporary conditions or occurrences such as construction, while long-term impacts are related to the ongoing, day-to-day noise events.

Short-Term Noise Impacts

As development continues within the City, construction-related noise near existing residential development may exceed acceptable levels and would have potentially significant impacts on these residences. Construction equipment can generate significant noise levels ranging from 70 dB to 105 dB immediately adjacent to construction sites. Although street and building construction activities would represent a temporary significant impact on ambient noise levels, they will terminate upon completion of the development project.

To mitigate construction noise on existing residences, the City Noise Ordinance restricts construction activities and limits associated noise levels to daytime working hours Monday through Saturday.

Long-Term Noise Impacts

Increased vehicular traffic resulting from new development can be expected to increase incrementally the ambient noise levels on the major roadways throughout the City.

To determine future noise levels throughout the community, general plan land use information and anticipated future traffic volumes and vehicle mixes were entered into a computerized community noise model. Map 12 of the General Plan displays future noise contours for the year 2015.

The future noise contour map indicates that the noise environment will not change dramatically. Noise increases along the major roadways can be expected to increase due to anticipated increases on daily traffic volumes. Some residences fronting along these major streets may experience some increases in noise, while residences in the outlying areas or along minor streets are not expected to be adversely

affected. Vehicles using the alley network are also a potential source of noise. However, traffic volumes in the alleys are generally low, but nuisance noise still occurs.

Development occurring in the outlying areas adjacent to agricultural land may be exposed to farm equipment noise including tractors, irrigation or other equipment. These types of noise events are generally short-term and unavoidable. Adequate buffering in the form of solid walls, berms, or distance from activity can reduce this potential impact.

Noise Standards

To aid Coalinga decision makers with the establishment of noise standards, federal and state agencies have established noise/land use compatibility guidelines. These guidelines are all based upon cumulative noise criteria such as Leq (equivalent noise level), CNEL, or Ldn.

Based on the adopted standards of other agencies and findings that noise levels above the thresholds of annoyance are a significant factor in determining the quality of life in a community, the City of Coalinga adopted the objectives and standards for noise levels listed in Part I, Standards 2, Noise Standards.

The State Department of Housing and Community Development has established mandatory noise guidelines for multiple-family residential construction. New multiple-family units cannot be exposed to outdoor ambient noise levels in excess of 65 dBA (CNEL or Ldn), and sufficient insulation must be provided to reduce interior ambient levels to 45 dBA (Appendix Chapter 35 of Title 24 of the California Code of Regulations). Section 65302 of the Resources Code requires the General Plan to recognize the guidelines established by the Office of Noise Control in the State Department of Health Services.

F-2 FLOODING

Setting

The Coalinga planning area is located in Pleasant Valley. Unlike the San Joaquin Valley, which drains to the Pacific Ocean, drainage in the Pleasant Valley is characterized by basins of interior drainage. These basins contain ephemeral lakes and streambeds which are dry except in late winter and in the spring. The City of Coalinga is situated at the confluence of Los Gatos and Warthan Creeks. The stream channels run along the northeast and southeast edges of the City, respectively.

Warthan and Los Gatos Creeks flow easterly out of the southern hills of the Diablo Range and converge at the eastern edge of the Coalinga city limits, in the middle of Pleasant Valley. The Los Gatos Creek watershed above this point is about 144 square miles; Warthan Creek drains an area of about 118 square miles.

Warthan Creek is channelized (straightened) within the Coalinga Sphere of Influence and bordered on both sides by levees. Most of the channelization and levee work was accomplished by farmers in the early 1900s. After the 1983 earthquake, tons of concrete rubble and other debris were dumped along both banks of Warthan Creek for additional bank stabilization.

The Los Gatos Creek channel is in a more natural state for about three and one-half miles from the western edge of the Sphere of Influence to the old railroad bridge. In this reach, the channel is wide, shallow, and meandering. Below the railroad bridge, the channel has been scraped and shaped.

Within Pleasant Valley, these streams flow intermittently, carrying water only when rainfall has been substantial enough to generate runoff. During very dry years, there may be no surface flow at all near town. During wet years, flow may be sustained for several weeks. Winter flows from Los Gatos and Warthan Creeks subject the planning area to periodic flooding.

The Federal Emergency Management Agency (FEMA) flood hazard map for the City and for unincorporated Coalinga fringe is shown in Map 10 of the General Plan. Portions of the City, including some existing (1994) developments generally east of Garfield Street fall within the 100-year flood zone for Warthan and Los Gatos Creeks.

Responsibility of both storm drainage and flood control lies with the City. The City currently (1993) has no complete master plan for provision of storm drainage. However, one is currently (1993) being prepared to assist the city in complying with National Pollution Discharge Elimination System (NPDES) requirements (water quality regulations).

Storm drainage for the City is directed to Warthan and Los Gatos Creeks west of the sewage treatment plant. In addition, some stormwater is placed in two ponding basins at the school farm site in the eastern portion of the City. This basin retains water during high flows for later release.

The City has prepared a Management Plan for Warthan Creek and Los Gatos Creek (October, 1990) which includes goals, policies, and implementation programs for managing the streams, including flood hazards, open space corridors, natural habitat, watershed, and recreation.

Flooding and Drainage Analysis

Flooding

According to the revised FEMA Flood Insurance Rate Maps (FIRM), some parcels within the City's Sphere of Influence are situated within the designated 100-year flood zone. Any structures constructed within the designated flood zone would be subjected to the potential risk of flood damage including inundation or foundation damage during severe storms.

All development proposed within a designated flood zone shall be required to use site planning techniques to ensure that structures are elevated at least one foot above the 100-year flood zone. In addition, new development shall be designed to prevent additional downstream flooding resulting from the placement of structures and other improvements in the floodplain.

Drainage

During the construction phases of individual development projects, grading and construction activities will remove any existing vegetation and expose bare soils. The use of heavy equipment will loosen and/or compact the soil. During heavy rains, runoff and/or sediment load increases may occur downstream as a result. The extent of additional runoff or sediment load increases can vary significantly depending on the size of the site and local geologic factors. This additional runoff could adversely affect localized areas requiring drainage improvements.

On the long term, development provided in the General Plan, especially in undeveloped or agricultural areas, and any identified localized areas currently (1994) needing drainage improvements, will increase the speed and amount of runoff by increasing the percentage of impervious surfaces (i.e., streets, sidewalks, parking lots, buildings, etc.). Water which would otherwise infiltrate into the soil will instead become storm runoff, incrementally reducing storm water conveyance capacity.

Runoff from commercial areas carries a greater potential for contaminants and decreased water quality compared to runoff from residential areas. Regulations from the U.S. Environmental Protection Agency (EPA) and those included in the NPDES permit will likely require ponding of commercial runoff prior to discharge to the creeks to collect sediment and contaminants.

F-3 GEOLOGY AND SEISMICITY

Setting

Landform and Geology

The Coalinga area landscape is marked by steep mountains and rolling foothills giving way to the flat plains of the Central Valley. In geological terms, the area is an anticline: folds of layered strata, pushed by the buckling of the Earth's crust, with the oldest strata at the center producing mountain peaks. This geology is typically responsible for trapping oil fields.

The planning area is located in the Pleasant Valley region of the San Joaquin Valley. The San Joaquin Valley is structurally part of the Sierra block that forms the Sierra Nevada to the East.

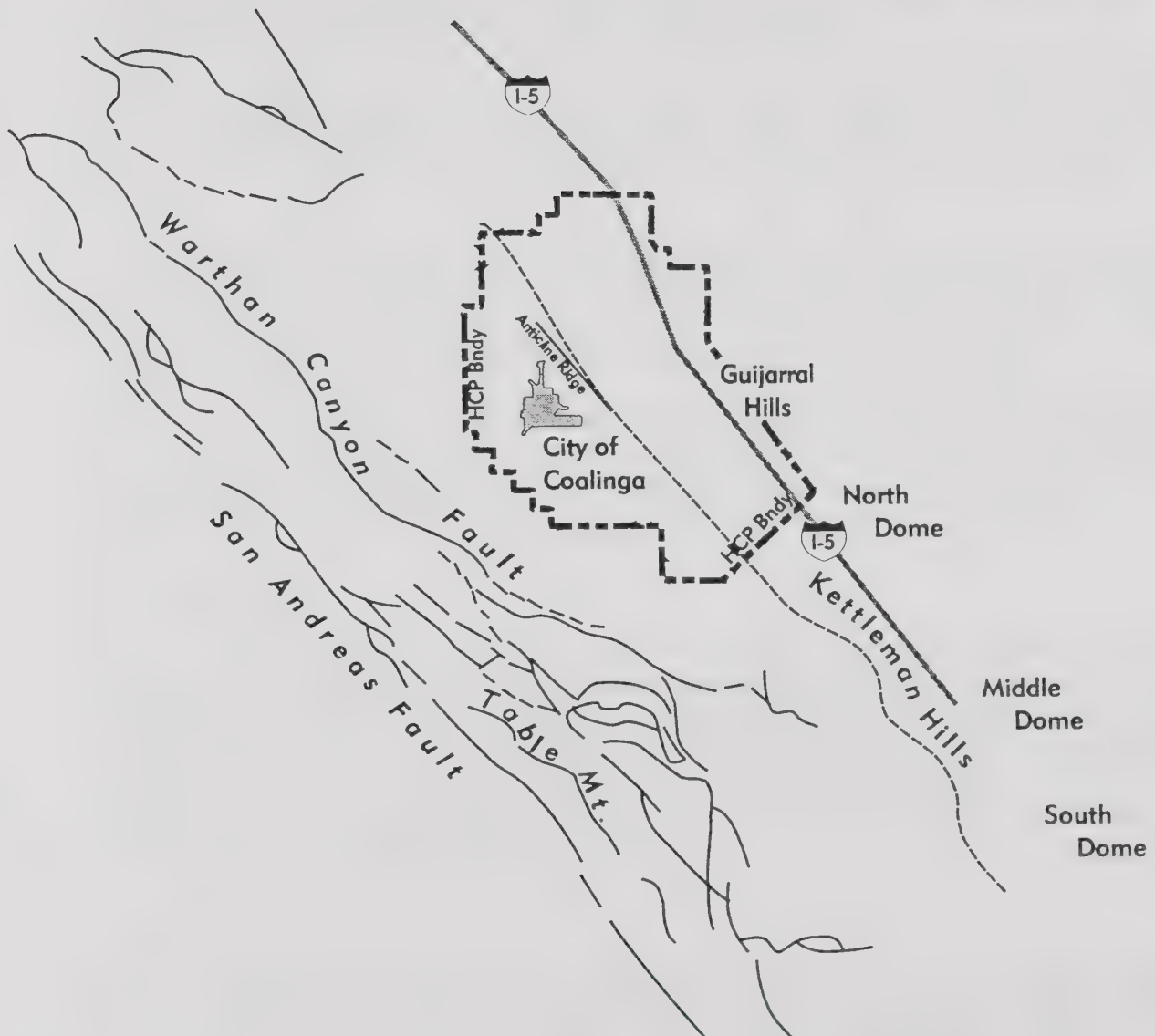
The area also is located at the confluence of two stream systems, the Los Gatos Creek to the northeast and Walnut Creek to the southeast.

Regional Faulting and Seismicity

The planning area is located within a region of California that is seismically active both historically and recently. Numerous mapped faults in the region could produce significant ground shaking in the area, including the San Andreas, Pond-Poso Creek and White Wolf faults, located west and south of the City. Active faults surrounding the San Andreas Fault have produced large earthquakes in this century and are expected to produce similar large earthquakes in the future. The 1983 Coalinga earthquake, centered eight miles northeast of the city, measured 6.7 on the Richter scale and caused widespread damage to structures. The hills near Coalinga contain evidence of deep faulting in the Anticline Ridge area. Regional faults are depicted in Figure 7.

The 1983 Coalinga earthquake is thought to be associated with a geologic feature often referred to as the "Coast Ranges-Sierran block boundary zone" (CRSBBZ). Generally speaking, this feature consists of a family of faults that appear to border the east side of the Coast Ranges. Many of these faults are likely to be active "blind-thrust" faults similar to the structure that produced the 1983 earthquake. Two similar type earthquakes are thought to have occurred in 1892 near the Winters-Vacaville area adjacent to the Sacramento Valley. In addition, the 1985 M5.5 Avenal earthquake indicates similar-type faulting in the Kettleman Hills region just southeast of Coalinga.

The two principal seismic hazards to property in the Coalinga area are damage to structures and foundations due to strong ground shaking, and surface rupture of earth materials along fault traces. To protect structures from the hazards of surface ground rupture, the California Department of Conservation, Division of Mines and Geology under the State-mandated Alquist-Priolo Special Studies Zone Act of 1972,



Source: Coalinga Earthquakes, May 1983.

Figure 7
Regional Fault Map

has delineated special study zones along active or potentially active faults. An active fault, as defined by State law, is a fault which has been proven by direct geologic evidence to indicate movement within the last 11,000 years. A fault that has been proven by direct geologic methods not to have moved in the last 11,000 years is not active. The potentially active designation includes those faults which were active within the last two million years (Quaternary Period), but have not been studied in sufficient detail to be classified as either active or inactive.

Portions of Fresno County near the Coalinga area have been zoned for special studies as outlined in the Alquist-Priolo Special Studies Zone Act. These areas are located along the Nunez Fault, located approximately six miles northwest of Coalinga.

Several secondary phenomenon are associated generally with strong seismic shaking, especially in areas characterized by a relatively shallow ground water table, and underlain by loose, cohesionless soil deposits. These secondary seismic hazards include liquefaction, seismically induced settlement, and ground lurching.

The thickness of alluvial deposits in the San Joaquin Valley generally increases to the west. The depth of bedrock-type formation in this portion of the valley is estimated to be several thousand feet. The water table is at a depth of between 300 and 400 feet, effectively reducing the potential for liquefaction in this area.

Groundshaking

The intensity of groundshaking at a given location depends primarily on the earthquake magnitude, the distance from the epicenter to the site, and the response characteristics of the soils or bedrock units underlying the site. The San Andreas Fault is potentially capable of producing the most intense ground accelerations at the site. A maximum credible earthquake of Richter magnitude 7.8 on the San Andreas Fault would produce seismic shaking capable of significantly damaging structures and infrastructure in the area.

Liquefaction

Liquefaction is the sudden loss of strength that occurs when loose, cohesionless, water saturated soils are subjected to strong seismic ground motion. Structures built on these soils tilt or sink when the soils liquefy. Liquefaction occurs in an earthquake-prone area underlain by alluvium and where the ground water table is less than 50 feet below the surface.

Given the depth of the ground water table in the area (300 to 400 feet) the potential for liquefaction is considered less than significant.

Seismically Induced Settlement

Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Unconsolidated, poorly

packed alluvial deposits especially are susceptible to this phenomenon. Inadequately compacted artificial fills may experience seismically-induced settlement also.

Following the 1983 Coalinga earthquakes, several damage assessment studies were initiated. Based on the settlement values reported after the 1983 event, the potential for seismic settlement and/or differential compaction within the planning area is considered minimal.¹

Soils

Soils in the Coalinga area have been formed by erosion and deposition from nearby waterways. These soils have been classified by the U.S. Department of Agriculture (USDA) Soil Conservation Service as prime for agricultural purposes.

Geologic and Seismic Analysis

Environmental impacts associated with geologic conditions can be divided into two major categories: short-term impacts, which are generally associated with the construction of a specific project; and long-term impacts, which represent the completed projects' exposure to ongoing environmental conditions. Since the proposed project is the implementation of the General Plan, a number of individual development projects may be undertaken to implement the plan during the next 10 to 20 years.

Short-Term Geologic Conditions

Proposed land use policy will encourage new development and construction into currently vacant or agricultural land within the City's Sphere of Influence. To assess short-term impacts more effectively, the city requires site-specific soil investigations. From this review, the identification of any site-specific constraints, will assist in determining the level of mitigation necessary to allow site development. Most inherent soil limitations present in the planning area can be mitigated adequately using current building and engineering practices.

During the construction phase of individual projects and other incidental development occurring within the city and planning area, grading and earthwork will be necessary to prepare sites for development. The topography of the city and surrounding agricultural areas is relatively level and earthmoving and grading operations are not expected to be create significant problems.

During the construction phase of individual development projects, exposed rock and soil may increase the chance of soil erosion if these surfaces are left unprotected during periods of high winds or rains. Remaining vacant parcels within the urbanized City are relatively few and small; large-scale erosion in this area is not

¹State of California Department of Corrections, California State Prison - Fresno County at Coalinga Draft Environmental Impact Report, March 1990, Michael Brandman Associates.

anticipated. Erosion potential is increased in the outlying agricultural areas and appropriate mitigation measures will be identified to reduce this condition. Implementation of standard erosion control and engineering technique during construction should reduce this impact to an acceptable level.

Long-Term Seismic Conditions

Development occurring as a result of proposed land use policy may be exposed to seismic events and hazards over the long-term.

Groundshaking

Additional development anticipated in the General Plan will result in the exposure of additional people and structures to groundshaking in the event of an earthquake. Buildout projections in the General Plan anticipate nearly doubling the city's housing and population figures to 6,700 dwelling units with a population of 16,500 persons.

This area experienced a powerful and damaging earthquake in 1983, and can expect future seismic activity. Any groundshaking that may occur in the region would be expected to be similar throughout the city as a whole and no unusual or unique risk is posed by additional development.

The Uniform Building Code, as amended by city ordinance, contains minimum requirements regarding seismic considerations for all new structures that will be enforced through review of plans and inspections of structures during construction. Building code requirements will provide the greatest level of safety for new structures.

In addition:

- a. The UBC is reviewed and updated on a regular basis to incorporate latest knowledge on appropriate seismic design, with the most recent edition issued in 1994; and
- b. The UBC also contains provisions for site geotechnical investigations and reports under Foundations and Retaining Walls (Chapter 18 of the current UBC), as well as Appendix Chapter 33 (Grading and excavations). DMG suggests that the City consider adopting UBC site investigation provisions provided in both Chapters.

Existing, law generally provides detailed seismic design requirements and provisions for engineering geologic/seismic and geotechnical investigations for certain critical and essential services buildings (e.g., hospitals, schools, etc., regulated under Title 24 of the California Administrative Code by appropriate State agencies).

Because groundshaking has the potential to directly affect life, property and/or major public facilities, this impact is considered potentially significant.

Liquefaction

In order for liquefaction to pose serious threats to life and property, cohesionless soil conditions and a high groundwater table must both be present. Well data for this area indicate that high groundwater conditions do not exist; therefore, liquefaction potential is not considered significant.

Soils

Soils within the planning area generally have been identified as having some limitations to building development. In built areas of the City where previous soil limitations have been corrected, new development in these areas does not pose a significant problem. Measures will be implemented in current agricultural areas to eliminate soil limitations.

Erosion of barren rock and exposed soil during construction may occur during periods of rain or high winds. Additional overcovering of the soil will increase downstream runoff to Los Gatos and Warthan Creeks.

Additional information pertaining to local seismic and geologic conditions can be found in the following sources:

California Division of Mines and Geology, 1983, The 1983 Coalinga, California, Earthquakes: Special Publication 66, 335p.

Namson, J.S., and Davis, T.L., 1988, Seismically active fold and thrust belt in the San Joaquin Valley, central California: Geological Society of America, Bulletin, v.100, p.257-273.

Rymer, M.J., and Ellsworth, W.L., (eds), 1990, The Coalinga, California, Earthquake of May 2, 1983: USGS Professional Paper 1487, 417p.

Wentworth, C.M., and Zoback, M.D., 1989, The style of late Cenozoic deformation at the eastern front of the California Coast Ranges: Tectonics, v.8, n.2, p.237-246.

Wong, I.G., Ely, R.W., and Kollman, A.C., 1988, Contemporary seismicity and tectonics of the northern and central Coast Ranges-Sierran block boundary zone, California: Journal of Geophysical Research, v.93, n.B7, p.7813-7833.

F-4 FIRE SAFETY

This section discusses the risks associated with urban and wildland fires.

Urban and Wildland Fires

The City of Coalinga is susceptible to both urban and wildland fire hazards. Both urban land uses with inappropriate or outdated building materials and the native landscape that surround Coalinga are potential fire hazards. According to the Coalinga Fire Department, housing units constructed with wood shake roofs or wood siding present potential fire hazards. However, many of the older buildings were destroyed in the 1983 earthquake and have been rebuilt to newer fire codes which have improved the fire safety of these rebuilt structures. Wildland fires also pose potential hazards in the hilly areas where chaparral and other vegetation is present. The Fire department has adopted a weed abatement program to reduce property damage from wildland fires.

Water Storage/Fire Flow

All new development will be constructed to meet current fire codes, including building materials, sprinklers (where required), hydrants, and access. New development must also demonstrate that adequate fireflows are available.

A basic fire flow of 2,500 gpm can be maintained for two hours at any time during a period of three days with consumption at the maximum rate. Improvements in the early 1990s to the water storage and delivery system allow the City to meet fire flow requirements in the event of serious disruption to the water supply.

In a single-family residential area, a fire flow of 1,500 gpm at a 20-pound per square inch (psi) residual pressure is commonly applied. Fire flow requirements in nonresidential areas vary at each location according to construction material, square footage, number of stories, and building usage. The "basic fire flow," as defined by ISO for Coalinga, is 1,500 gpm with a duration of two hours (300,000 gallons).²

Urban and Wildland Fire Analysis

Fires occurring in the urban area have the potential to destroy property and structures, and cause injury or loss of life. Wildland fires can destroy large tracts of land as well as structures. Fire prevention standards for new development in the City generally follow those prescribed in the Uniform Building Code. Development in accordance with these required standards will reduce the potential damage from fire.

²Ibid.

New development will require improvements and upgrades to the water storage and distribution system to maintain adequate fire flows. The City's Water Master Plan identifies upgrades and improvements necessary to maintain this system. Developers will be required to install all necessary on-site improvements including water lines and hydrants in accordance with city codes and requirements. Development will not be allowed in any area until it can be demonstrated that adequate fire flows can serve the site in question. In addition, the City will continue to support the annual weed abatement program to reduce the potential for wildland fires.

F-5. HAZARDOUS MATERIALS

This section discusses the risks associated with exposure to hazardous materials from historic, present or future sources.

Setting

Hazardous materials are present throughout the city, but are widely varied in terms of quantity and type. Businesses using hazardous materials may include dry cleaners or automotive service shops which routinely utilize solvents and other potentially hazardous substances. Agricultural operations in the outlying area regularly store and use a variety of pesticides and herbicides. Households also utilize and store materials which could be considered hazardous, although usually not of the same type and quantity as commercial and agricultural uses. There are no major manufacturing or other heavy industrial uses within the City. The absence of heavy industrial base significantly reduces the amount of hazardous materials present within the City, thereby reducing the risk of exposure in the event of upset conditions. Oil production activities and operations in the outlying areas may transport hazardous materials through the City.

The area surrounding the City historically has been used for agricultural production. Historical data on pest control on cotton crops and hardy row crops and data provided by the Fresno County Agricultural Commissioner's office indicate that a variety of pesticides have been used on surrounding cropland. In general, the pesticides used were defoliants and insecticides. None of the pesticides reportedly used are persistent in soil, and if they were applied according to manufacturer's directions, should be at residual levels below that which is harmful to human dermal contact. It should be noted that pesticide mixing or storage areas can have much higher residual concentrations and, although undocumented, such areas may exist.

Hazardous Materials Analysis

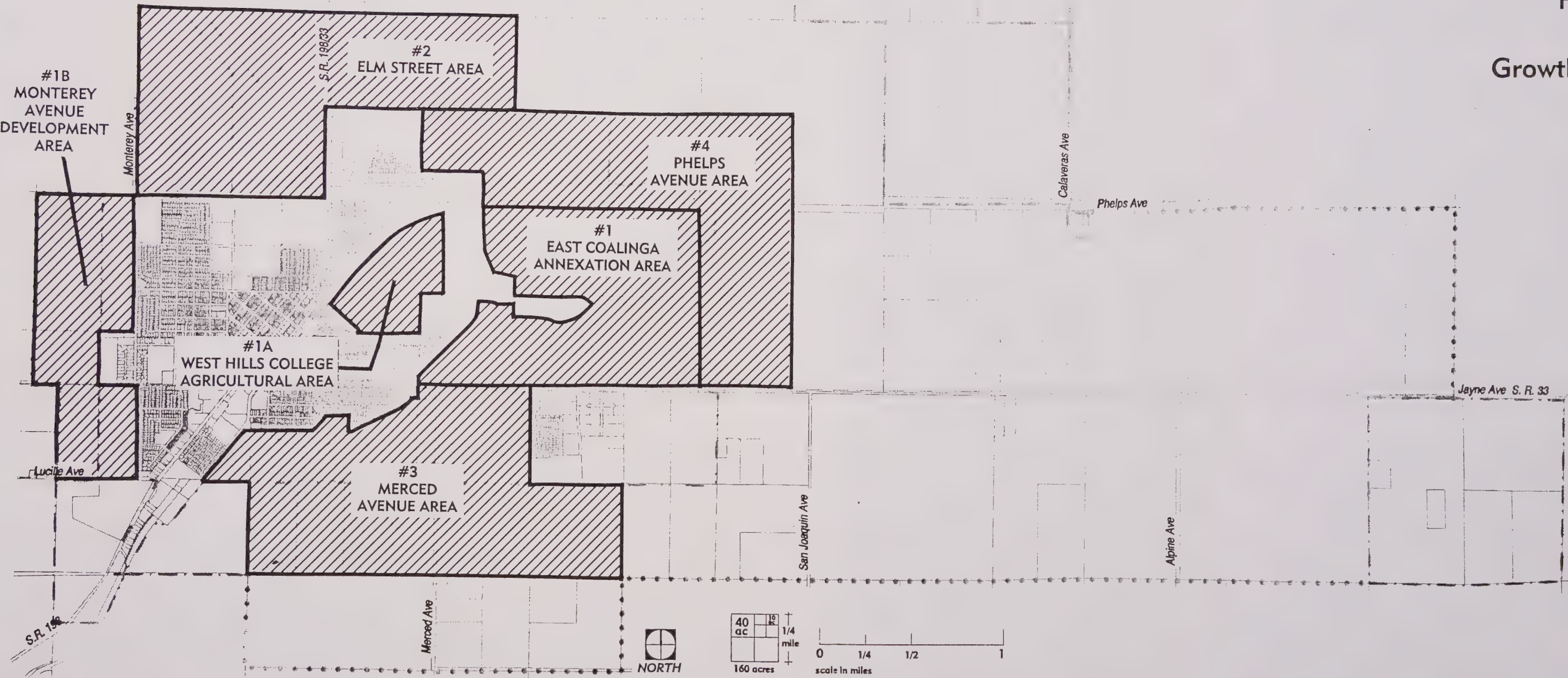
General Plan land use policy allows for certain industrial uses that may use, store, or transport limited amounts of hazardous materials through the City. These uses may include a variety of commercial uses such as service stations, dry cleaners, medical supplies, or various types of research and development, light assembly, or oil production-related activities. These uses do not represent an unusual or unique risk of explosion or release of hazardous substances and will not significantly impact the community.

In the event localized soil contamination conditions exist, construction workers may be at risk of exposure. Any contaminated sites will be completely remediated prior to development.



Figure 1

Growth Areas



Source: City of Coalinga, Planning Department, 1994.

APPENDIX A
ENVIRONMENTAL IMPACT REPORT
REFERENCE DOCUMENT
COALINGA GENERAL PLAN

State Clearinghouse No.94072015

City of Coalinga
155 W. Durian Avenue
Coalinga, California 93210

Contact Person:
David Bugher, Planning Director
(209) 935-1521

August, 1994

Consultants to the City:

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#804

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CEQA (*Guidelines* Section 15120(b)). The *CEQA Guidelines* require that an EIR contain specific components of description and analysis. Table A identifies the required components of an Environmental Impact Report (*Guidelines* Section 15120 (c)) and identifies where these components are located in the Coalinga General Plan.

General

In order to define the scope of investigation in the EIR, the City of Coalinga notified all city agencies, responsible and trustee agencies, other public agencies, and other interested organizations and individuals with a Notice of Preparation to identify city and public concerns regarding potential impacts of the proposed General Plan.

This EIR is intended to provide information to public agencies and to the general public regarding the potential environmental impacts related to implementation of the Coalinga General Plan. Under the provisions of CEQA, the purpose of the EIR is, "to identify the significant effects of a project on the environment, to identify alternatives to the project and to indicate the manner in which significant impacts can be mitigated or avoided." Thus the EIR is an informational document for use by decision makers, public agencies, and the general public. It is not a policy document which sets forth city policy about the desirability of any potential alternatives discussed.

CEQA requires the decision maker to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve the project. If the benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable" (Section 15093).

Where the decision of the public agency allows the occurrence of significant effects which are identified in the Final EIR but are not at least substantially mitigated, the City shall state in writing the specific reasons to support its action based on the EIR or on other substantial evidence in the record.

The EIR in the Development Process

The City will use the EIR in assessing impacts of proposed land use policy. During the development process, alternatives and mitigation measures identified in the EIR may be applied to specific projects by the City, if applicable.

This EIR is considered a "program" EIR under CEQA Section 15168 and can be used with subsequent EIRs and Negative Declarations on later parts of the program: to provide the basis for an Initial Study for determining whether the later activity will have any significant effects; to be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives; and to focus an EIR for a subsequent project to permit discussion solely on new effects which had not been considered before. This EIR does not

preclude the City from requiring project-level EIRs for specific future development projects even if those projects are consistent with the General Plan.

Availability of Reports

The EIR is available for public inspection and copying at the City of Coalinga, 155 W. Durian Avenue.

Copies are available to the public for review and check-out or on payment of reasonable charges for reproduction. Circulating copies are available at the local library. Documents may be reviewed during regular business hours.

Comments Requested

All comments on the Draft EIR should be sent to the following city staff contact:

David Bugher
Planning Director
155 W. Durian Avenue
Coalinga, CA 93210

PROJECT DEVELOPMENT CHARACTERISTICS

The text contained in *Part I: Coalinga Plan 2015* and the accompanying Maps 1 through 13 constitute the proposed project. Part I of the General Plan includes a complete discussion of future land use policy, land use designations, and graphic illustrations and descriptions of future land use, public facilities, and transportation components.

RELATED PLANS AND PROGRAMS

A complete discussion of other regional plans and programs influencing development within the Coalinga area is included in *Part I: Coalinga Plan 2015*, Related Plans and Programs.

ENVIRONMENTAL IMPACTS

City staff determined that an EIR should be prepared for this project pursuant to Section 15065 of the State CEQA Guidelines in order to identify any potentially significant adverse impacts and in order to recommend mitigation that would reduce these impacts to levels of insignificance. A summary of impacts is included in Table A at the end of this section.

CEQA law and Guidelines recognize the difficulty of preparing an EIR for a General Plan since the Plan does not represent a specific development proposal with well-defined project characteristics. Future development in accordance with proposed land use policy may result in potentially significant environmental impacts; however, goals and policies contained in the proposed General Plan are intended to lessen these impacts.

Unavoidable Significant Adverse Impacts

This Environmental Impact Report Reference Document identifies impacts on schools as an unavoidable significant adverse impacts, as defined by CEQA, that would result from development according to the proposed General Plan.

Potentially Significant Adverse Environmental Impacts That Can Be Mitigated, Avoided or Substantially Lessened

This EIR identifies ten potentially significant adverse impacts which can be avoided or substantially lessened. Mitigation measures may be included as part of the proposed project, be required by the City, or be implemented by another agency. These impacts include:

- Soils/Erosion
- Seismic Groundshaking

alternative has been analyzed throughout this document as the "environmental setting" scenario.

This alternative may be considered environmentally superior to the proposed project because it imposes no additional demands on local facilities or services and would not impact existing natural systems and physical features.

Although the no project alternative may be environmentally superior to the proposed project, due to development restrictions, it is not consistent with city goals, policies and development trends. The construction of the new prison and the new airport have been approved already, and additional housing and services are necessary to accommodate this future development.

Alternative 2: Development in Identified Growth Areas

A number of land use options were investigated in the writing of the General Plan to determine a reasonable level of future development. After determining a reasonable level of development, investigations of the City and the surrounding Area of Interest were conducted to identify potential areas that could accommodate projected future development. During that phase a number of locations were identified. All include adequate land available to accommodate projected growth.

Based on these growth expectations, six general growth areas were identified. Only one growth area is required to serve the anticipated population. The City will decide which growth area, or portions of growth areas, will be most appropriate. By discussing some alternatives which represent General Plan policies, the City may anticipate the less extreme impacts of the choices without having to analyze alternatives in great detail.

The six growth areas include:

- **Growth Area 1 - East Coalinga Annexation Area (723 acres or 1.13 sq. mi.):** This area is directly east of the existing city limits. Its main existing roads are Phelps Avenue on the northern boundary and Polk Street (Highway 33) on the southern boundary. Land use plans and environmental analysis have been prepared for this growth area.
- **Growth Area 1a - West Hills College Agricultural Area (154 acres or 0.24 se. mi.):** Located in the eastern portion of Coalinga, this area is utilized currently by West Hills College as part of its agricultural program. It is adjacent to the East Coalinga Annexation Area. Although any future use of this land remains undecided, it may become available for new development.

The precise location of the additional units cannot be determined at this time, although sufficient developable land exists. This scale of additional development would likely require some level of special conditions, such as a self-contained residential community.

Land is available to accommodate this increase in population; however, this level of development would create additional environmental concerns. The City's water supply becomes a limiting factor with regard to future population increases. Residential land uses adjacent to agricultural land uses are incompatible due to pesticides, dust, and other agricultural effects.

Choice Among Alternatives

Among the alternatives discussed in the EIR, the no project alternative may be considered environmentally superior. However, this no project is not considered feasible or desirable because it does not meet the City's goals for logical and planned growth. Development considered in Alternative 2 offers the City the greatest flexibility in accommodating future development with reduced levels of environmental impact. Therefore, development in accordance with proposed land use policy is the preferred alternative.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

To date, no major areas of controversy have been raised by the public with regard to the environmental impacts associated with the proposed General Plan.

MITIGATION MONITORING PROGRAM

In accordance with Section 21081.6 of the Public Resources Code, a mitigation monitoring program will be adopted by the City if the project is approved. The monitoring program will be designed to ensure compliance with the mitigation measures adopted in this EIR Reference Document. The mitigation measures are policies taken from the elements of the General Plan. The EIR Reference Document does not, and need not, contain a mitigation monitoring program. A mitigation monitoring program will be developed separate from the EIR document.

TABLE A
SUMMARY OF IMPACTS AND MITIGATION
Continued

SEISMIC GROUNDSHAKING

Potential Environmental Impact

Development in the region will be exposed to seismic events over the long-term.

Mitigation Measures

Public Safety Element Policies 1 and 2;
Fire and Police Protection Policies 1, 3, and 4.

The Uniform Building Code contains requirements regarding seismic considerations for all new structures that will be enforced through review of plans and inspections of structures during construction.

Impact After Mitigation

With implementation of General Plan policies and other identified measures, seismic ground shaking impacts will be substantially lessened.

AIR QUALITY

Potential Environmental Impact

Development anticipated in accordance with proposed land use policy has the potential to contribute pollutants to the air basin during construction and operation.

Mitigation Measures

An Air Quality Element has been prepared as part of the proposed General Plan. The Air Quality Element will be used in conjunction with the other General Plan elements to implement coordinated and consistent land use circulation, housing and air quality policies and programs.

Impact After Mitigation

Implementing the policies and programs contained in the Air Quality Element to the greatest extent feasible will substantially lessen air quality impacts. Although air impacts will be substantially lessened, after review of thresholds adopted by the District, air quality impacts may still be considered potentially significant.

TABLE A
SUMMARY OF IMPACTS AND MITIGATION
Continued

FIRE PROTECTION

Potential Environmental Impact

Additional development will result in increased fire protection need in order to maintain adequate fire protection and services.

Mitigation Measures

Public Safety Policies 1 and 2;
Fire and Police Protection Policies 1, 2, and 3.

Impact After Mitigation

Development in accordance with the goals, policies and implementation measures contained in the General Plan will substantially lessen fire protection impacts.

RECREATION

Potential Environmental Impact

Additional development will increase the demand on existing park and recreation facilities.

Mitigation Measures

Land Use Element Policy 4.

Impact After Mitigation

Substantially lessened to less-than-significant level.

1. PROJECT DESCRIPTION

The Project

The City of Coalinga proposes the development of a comprehensive General Plan. The Coalinga General Plan consists of three integrated components: Part I: Coalinga Plan 2015; Part II: Special Plan Documents; and Part III: Planning Context. These three components collectively constitute the City's major, official guide for future development. These three components, taken together, fulfill the legal requirements of the California State planning law (Government Code Section 65302 *et seq.*) In addition, they include several items which are optional, but important to the City of Coalinga. These include the relationship with the Habitat Conservation Plan (HCP) and the Airport Land Use Plan.

The framework is structured around the typical General Plan subject areas (or elements):

- 1) Land Use
- 2) Housing
- 3) Infrastructure (circulation and utilities)
- 4) Resources/Conservation
- 5) Recreation and Open Space
- 6) Public Safety
- 7) Air Quality, and
- 8) Airport Land Use

Part I: Coalinga Plan 2015 serves as the "foundation for City public policy." This section includes text and graphics which describe future land use policy, land use designations, and proposed public facilities.

Part II: Special Plan Documents includes other elements vital to determining future development within the City. These documents include the Housing Element, the Air Quality Element, the Airport Land Use Plan, and the Habitat Conservation Plan summary.

Part III: Planning Context provides a complete assessment of existing conditions and an analysis of future conditions. This section provides justification for the policy framework proposed in the text and maps of Part I.

Project Location

The City of Coalinga is located in Pleasant Valley at the base of the coast mountain ranges on the western side of California's Central Valley. Coalinga is located in Fresno County, approximately 100 miles north-northwest of Bakersfield. Interstate 5, the main north-south highway through the state, is located approximately 10 miles east of downtown Coalinga. The area

proposal with well-defined project characteristics. This EIR for the Coalinga General Plan focuses on the secondary effects that may be expected from the long-term implementation of the Plan, particularly from the Land Use Element. Future development in accordance with land use policy may result in potentially significant environmental impacts; however, goals and policies contained in the various elements of the General Plan are intended to lessen these impacts substantially.

Planning case law has established the General Plan as the guiding document for future development. City ordinance regulating land use must be consistent with and implement the General Plan. Zoning ordinances, specific plans, redevelopment plans, and individual project plans must be consistent with the goals, policies, and standards established in the General Plan.

RELATED PLANS AND PROGRAMS

A complete discussion of other regional plans and programs influencing development within the Coalinga area is included in *Part I: Coalinga Plan 2015* Related Plans and Programs, pages 19-24.

INTENDED USES OF THE EIR

This EIR will be used by the City of Coalinga to provide the information necessary for environmental review of discretionary actions related to adoption and implementation of the General Plan. The EIR may be used for reviewing the following discretionary actions:

1. General Plan Adoption

Both the City Planning Commission and the City Council will hold public hearings to discuss the proposed General Plan and the environmental effects associated with Plan implementation. The EIR will be used to identify impact related to the Plan.

2. Subsequent Environmental Review

The General Plan, supporting technical documents and the EIR may serve as an environmental database for subsequent EIRs and for environmental assessments prepared for city programs and individual projects in the City. These documents may provide sufficient CEQA documentation for some future public and private projects.

2. DESCRIPTION OF THE ENVIRONMENTAL SETTING

The City of Coalinga was incorporated in 1906 and is a general law city. Coalinga is located in Pleasant Valley in southwest Fresno County at the base of the coast mountain ranges on the western side of California's Central Valley. It is approximately 100 miles north-northwest of Bakersfield. Interstate 5, the main north-south highway through the state, is located approximately 10 miles east of the City. State Routes 198 and 33 provide access from the west and south, respectively. The population of the city is estimated at 9,500 persons.

Basic land use patterns have been established in Coalinga. Land uses outside the City to the northeast, east and south remain primarily agricultural. Oil recovery operations are located north and west of the City. Residential development within the City has been predominantly single-family. The detached single-family home is a major contributing factor to the "small town" character and quality of life experienced by Coalinga residents. The current housing stock is estimated as 80% single-family and 20% multi-family. Commercial uses are concentrated along Elm Avenue through the downtown, along 5th Street in the central business district, and at the Save Mart Shopping Center at Polk and Elm. Industrial uses are concentrated in the existing industrial area on south Elm between Polk on the north and Firestone Avenue on the south.

The City encompasses approximately 4.3 square miles. The Coalinga area landscape is marked by steep mountains and rolling foothills giving way to the flat plains of the Central Valley.

The City of Coalinga experiences an "inland Mediterranean" climate averaging over 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. The mean temperature over a 30-year period is 65 degrees, with average summer highs reaching 95 or more and winter lows of 45 degrees or so. With regard to local and regional air quality, the Air Resources Board (ARB) has designated the entire San Joaquin Valley a nonattainment area for the ambient ozone standard and particulate (PM10) matter. The metropolitan areas of Fresno, Modesto, and Stockton are designated as nonattainment for carbon monoxide, with Bakersfield classified as a nonattainment "transitional" area.

The City is situated at the confluence of Los Gatos and Warthan Creeks. These stream channels run along the northeast and southeast edges of town, partially defining the boundaries of the urban area. Vegetation along the stream channels from their headwaters to Pleasant Valley varies considerably. There are long reaches with no obvious, obligate riparian vegetation, occasional stands of large cottonwoods, marsh-like reaches with rushes and other small plants but no trees, and sparse to dense stands of small and large tamarisks. Cottonwoods and mesquite are native to the area.

3.0 ENVIRONMENTAL IMPACT ANALYSIS

As required by CEQA, this section identifies potential environmental impacts and develops mitigation measures to mitigate, avoid, or substantially lessen any significant effects of the project.

The EIR identifies all of the environmental issue areas identified in the CEQA checklist. Each potential impact is discussed and analyzed in the sections that follow. Each impact issue area is addressed according to the following format:

- **Environmental Setting:** A reference to the existing conditions, services, and physical environment of the planning area as described in Parts I, II and III of the General Plan.
- **Threshold for Determining Significance:** The amount or type of impact which constitutes a substantial or potentially substantial, adverse change in the environment. Some thresholds are quantitative (e.g., air resources, transportation/circulation), while others are qualitative (e.g., risk of upset, aesthetics). The thresholds and references are intended to help the reader understand why the authors of the EIR have concluded that a particular impact is considered "significant," "potentially significant," or "less than significant."
- **Potential Significant Environmental Effect:** A discussion of the impacts of the proposed project in both qualitative and quantitative terms. Based on the Thresholds for Determining Significance, project impacts can be considered "significant," "potentially significant," or "less than significant."
- **Mitigation Measures:** A discussion of the measures required by the City to avoid, mitigate, or substantially lessen potential adverse impacts.
- **Level of Significance After Mitigation:** A discussion of the level of potential impact of the project assuming all required and recommended mitigation measures are implemented. This determination addresses CEQA Guidelines Section 15091 in order for the City to define significant impacts.

The environmental issues to be discussed in this EIR include:

- | | |
|-------------------------|--------------------------------|
| 1. Earth | 10. Population/Housing |
| 2. Air | 11. Transportation/Circulation |
| 3. Water Resources | 12. Public Services |
| 4. Biological Resources | 13. Energy |
| 5. Noise | 14. Utilities |
| 6. Light and Glare | 15. Human Health |
| 7. Land Use | 16. Aesthetics |
| 8. Natural Resources | 17. Recreation |
| 9. Risk of Upset | 18. Cultural Resources |

3.1 GEOLOGY AND SEISMICITY

Environmental Setting

The surrounding landform and local geology of the Coalinga area is described in detail in *Part III: Planning Context*, Section, F-3. Part III also includes a discussion of regional faulting and seismicity and local soil conditions.

Threshold For Determining Significance For Earth-Related Impacts

Significance is difficult to define with respect to certain geologic hazards because of the many variables involved. For example, the significant effects of a major earthquake may vary widely with the physical characteristics of the event, such as location, magnitude, intensity, and duration. For the purpose of this analysis, significant impacts associated with geologic hazards are generally defined as those which have the potential to adversely affect life, property, and/or major public facilities.

With regard to grading and earthmoving operations, impacts may be considered significant if proposed grading results in: unstable earth conditions or substantial and adverse changes in the geologic substructure; substantial and adverse changes in topography or ground surface relief features; the destruction, covering or substantial modification of any unique geologic or physical feature; the inconsistency with adopted City standards and/or requirements; and substantial and adverse increase in wind or water erosion of soils, either on or off site.

Potential Significant Environmental Effects

Environmental impacts associated with geologic conditions can be divided into two major categories: short-term impacts, which are generally associated with the construction of a specific project; and long-term impacts, which represent the completed project's exposure to ongoing environmental conditions.

Part III: Planning Context includes an analysis of geologic and seismic conditions on future development in the City in both the short-term and long-term.

Short-Term Impacts

Based on the analysis included in *Part III: Planning Context*, most inherent soil limitations present in the planning area can be adequately mitigated using current building and engineering practices. The topography of the City and surrounding agricultural areas is relatively level, and earthmoving and grading operations are not expected to be create significant problems.

With the implementation of required site-specific mitigation measures, short-term construction related and soil erosion impacts will be substantially lessened to less-than-significant levels.

3.2 AIR

An Air Quality Element has been prepared as part of the General Plan. The Air Quality Element is located in *Part II: Special Plan Documents*.

Environmental Setting

Detailed background information on current conditions, including existing air quality, geography and topography, climate, and inversion layers is included in the Air Quality Element. The Air Quality Element also identifies the air quality standards adopted by the state and describes the district air quality plans that apply to the Coalinga area.

Thresholds for Determining Significance

The San Joaquin Valley Unified Air Pollution Control District determined that new projects may affect regional air quality both directly and indirectly. To determine the extent of a proposed project's environmental impact and the significance of such impacts the project's emissions should be compared to established thresholds of significance. If the lead agency finds that the project has the potential to exceed any of the air pollutant emission thresholds, the project should be considered to have a significant impact on air quality.

As of May 1994, the San Joaquin Valley Unified Air Pollution Control District was preparing air quality impact assessment guidelines and a mitigation quantification handbook. Expected to be completed in 1994, the guidelines and handbook will help governments assess and mitigate project-specific air quality impacts.

Potential Significant Environmental Effects

Development-related air pollution emissions are generated during the construction phase and the operational phase of each development project. Construction emissions include mobile source emissions from worker travel, construction equipment emissions, and dust resulting from grading and earthmoving operations. Operational phase emissions result from: on-site combustion of natural gas for space heating, cooking, and water heating; local and regional emissions from vehicles traveling to and from the project site; combustion of fossil fuels at power plants to produce electrical power used on the site; and possible emissions from new industrial processes.

Mitigation Measures

An Air Quality Element has been prepared as part of the proposed General Plan. The Air Quality Element will be used in conjunction with the other General Plan elements to implement coordinated and consistent land use, circulation, housing, and air quality policies and programs.

Implementation of the policies and programs contained in the Air Quality Element will lessen both short- and long-term air pollutant emissions substantially.

Level of Significance After Mitigation

Implementing the policies and programs contained in the Air Quality Element to the greatest extent feasible will lessen air quality impacts. Although air impacts will be lessened substantially, after review of thresholds adopted by the District, air quality impacts still may be considered potentially significant.

3.3 WATER

This section focuses on two water-related issues: water sources and demand, as well as flooding. Water distribution issues are discussed in the Utilities section of this EIR.

Environmental Setting

A complete discussion of water sources (surface, imported, and groundwater) and existing demand is included in *Part III: Planning Context*, Section D3: Water Conservation.

A complete discussion of flooding conditions within the City's Sphere of Influence is included in *Part III: Planning Context*, Section F2: Flooding.

Thresholds for Determining Significance

Appendix G of the CEQA Guidelines indicates that significant impacts on water supply can be expected if implementation of the proposed project will involve the potential to create substantial demands for water.

Flooding impacts are considered significant if project implementation would result in substantial flooding, erosion, and/or siltation in any surface body of water or if development would be subject to flooding.

Potential Environmental Effects

Water Demand. Additional development anticipated under the proposed General Plan will require additional water supplies to meet increased demand. However, the ongoing drought conditions throughout the state have forced municipalities to initiate conservation programs. These programs have resulted in reduced water consumption. Given the contractual agreements with the federal government, the City's allotment is based on the average consumption over the past five years. This amounts to approximately 5,000 AFY of "firm" water. Other water sources are available, but acquisition of these additional sources involve substantial increases in cost. Future water supplies will therefore be significant factor in ongoing development.

Flooding. Some parcels are situated within the designated 100-year flood zone. All development proposed within a designated flood zone shall use standard site planning techniques to ensure that structures are safe from potential flooding and that they will not exacerbate any potential flooding or drainage conditions downstream. This impact, therefore, is considered less than significant.

Drainage

Goals and policies contained in *Part I: Framework/Policy* of the General Plan require improvements to the storm drain system to accommodate anticipated future flows and runoff.

The following mitigation measures also are recommended for inclusion as part of individual project development conditions:

5. At the project level, developers will be required to install temporary culverts, ditches, dams, settling ponds, sandbagging or similar measures within the construction area to maintain the existing drainage flows and to collect excess water and sediments flowing from construction sites.
6. At the project level, developers shall be required to submit erosion plans for approval by the City Engineer prior to release of a grading permit.
7. At the project level, hydraulic studies shall be prepared, where appropriate, to determine limits of the flood plain for properties affected by the 100-year flood.

Level of Significance After Mitigation

Water Supply

With implementation of these mitigation measures, both short and long-term impacts on potable water supplies can be lessened substantially, although future water availability will continue to limit development.

Flooding

For those areas potentially affected by flooding, identified mitigation will substantially lessen this impact to less than significant levels.

Drainage

With implementation of General Plan goals and policies, and other identified measures, drainage impacts will be substantially lessened to less than significant levels.

3.4 BIOLOGICAL RESOURCES

Environmental Setting

In recognition of the many sensitive plant and animal species known within the Pleasant Valley area, the City of Coalinga is coordinating preparation of a Habitat Conservation Plan (HCP). The HCP is intended to allow for the comprehensive mitigation of impacts to plant and animal species in the Coalinga area. A summary of the HCP is included in *Part II: Special Plan Documents* along with a discussion of the existing setting in *Part III: Planning Context*.

Thresholds for Determining Significance of Biological Resources Impacts

Project impacts on biological resources are considered significant: if the project results in the reduction in numbers of species or habitat of any species listed in the state or federal inventories as threatened or endangered; if the project will interfere substantially with the movement of any resident or migratory fish or wildlife species; or if the project will substantially diminish habitat for fish, wildlife, or plants.

Potential Significant Environmental Effects

As stated in *Part III: Planning Context*, in surveys taken as part of the HCP and in other environmental studies, the 20-year development area has been determined to be non-critical. Although the area is non-critical in terms of habitat, certain areas such as Los Gatos and Warthan Creeks could be important movement corridors for wildlife species of concern, particularly the San Joaquin kit fox. Consideration should be given to maintaining and/to enhancing these corridors as development progresses.

Development impacts, therefore, if limited to the City's Sphere of Influence, are considered less than significant.

Mitigation Measures

General Plan policies in *Part I: Coalinga Plan 2015* support the approval and implementation of measures contained in the Habitat Conservation Plan.

Relevant policies include: Land Use Element Policies 4 and 5.

The General Plan Land Use Element defines the planned use of all land within the City's jurisdiction and the preferred policy for lands outside the City limits,

3.5 NOISE

Environmental Setting

The existing noise environment within the City of Coalinga is described in *Part III: Planning Context*, Section F-1.

Threshold For Determining Significance For Noise Impacts

Noise impacts are considered significant if a project will result in a violation of any noise ordinance or state standard for interior noise in a noise-sensitive area.

A change in long-term community noise levels is considered significant if the project will increase noise or vibration levels in the surrounding area or along affected roadways by more than one decibel CNEL, if the existing or proposed uses affected are noise sensitive, and if the noise levels will exceed established noise standards at residential or other noise-sensitive sites.

Potential Significant Environmental Effects

Based on analysis contained in *Part III: Planning Context*, construction-related noise near existing residential development may exceed acceptable levels and would have potentially significance impacts on these residences. Although street and building construction activities represent a temporary significance on ambient noise levels, they will terminate upon completion of the development project.

Long-term noise impacts are mostly associated with increased vehicular activity. Because of the relatively small amount of traffic, long-term noise contours are not expected to change dramatically throughout the City as a whole. However, some residences adjacent to major roadways may experience some increases in noise levels by the year 2015. It is possible that residences near the right-of-way fronting on Phelps Avenue, Polk Street, and Elm Avenue may be exposed to noise exceeding 60 dB CNEL. New residential development within these noise contours should be required to provide sound insulation to maintain interior noise levels below 45 dB CNEL in all habitable rooms. In addition, building setbacks, walls, and acoustical insulation can easily protect noise sensitive use located in higher noise areas.

3.6 AESTHETICS/LIGHT AND GLARE

Environmental Setting

The City of Coalinga is located in a rural area characterized by agricultural uses, oil facilities, and rangeland. The developed areas are predominantly residential with a relatively small downtown commercial core.

The topography of the City and vicinity is relatively flat, with low hills to the south and east.

The agricultural uses consist predominantly of row crops that do not obstruct distant viewsheds. Nearby oil facilities add an industrial character to the area. Vacant rangeland is found in outlying areas beyond the agricultural uses.

Potential impacts from light and glare are directly related to the level of urbanization within the City and the design of development. By design, virtually all sources of light will illuminate a surrounding area to some degree. The degree of illumination varies widely, depending on the candlepower of the light source, height of light, presence of barriers or obstruction, and type and design of light source. Illumination is the purpose of artificial lighting; the unwanted presence of illumination is called "spillover."

Because Coalinga is located in a rural area away from metropolitan areas, clear views of the night sky are available. The city lights are also visible for many miles. The primary sources of light within the City include illuminated signage, street lighting, interior and exterior residential lighting and automobile lighting.

Given the rural development character of the City, lighting levels are considered relatively low.

Threshold For Determining Significance For Aesthetics/Light and Glare Impacts

Aesthetic impacts are considered significant if the proposed project will result in a substantial or potentially substantial adverse change in any of the physical conditions within the planning area or objects of aesthetic significance; or will block significant views or vistas.

Light and glare impacts are considered significant if the project includes lighting features that will shine onto adjacent properties, interrupt operations of a light sensitive use (such as an observatory), or produce intrusive glare effects.

3.7 LAND USE

Environmental Setting

Existing land use is described in the text and displayed graphically in *Part III: Planning Context*, Section A and Figures 1-3.

Threshold for Determining Significance for Population/Housing

Land use impacts are considered significant if implementation of the proposed land use policy will result in a substantial alteration of the present or planned land use, or if it will result in incompatible land uses.

Potential Significant Environmental Effect

Anticipated development under the proposed General Plan is shown in Maps 1-3 in *Part I: Coalinga Plan 2015*. The proposed General Plan will allow for a moderate rate of growth within the basic existing land use patterns.

The overall land use impacts of the proposed General Plan are not considered significant because the Plan will not substantially alter the present or proposed patterns of land use in the urbanizing areas or result in large-scale incompatible land use. In areas to the east of the City, development of present agricultural land to urban uses represents a substantial change in present land use patterns. However, these areas are within the City's Sphere of Influence, and urban development has been the ultimate land use anticipated for this area. Development of these agricultural areas adjacent to the urban fringe will prevent future "leap-frog" development into other areas beyond the City's Sphere of Influence.

Some development may result in localized land use conflicts at the agricultural/residential/commercial interface. These conflicts may include increased traffic and noise, herbicide drift, and height and bulk of new structures. Because the General Plan does not designate or redesignate land for potentially incompatible land uses, this impact is considered less than significant.

Most of the commercial development anticipated under the General Plan will occur in infill areas on vacant or underutilized parcels within the commercial core.

3.8 NATURAL RESOURCES

Environmental Setting

Natural resource issues of concern in conjunction with implementation of the General Plan include increased rates of consumption of any natural resources and the substantial depletion of any non-renewable natural resource. The term "natural resources" can be broadly interpreted to include such environmental elements as air, water, timber, agricultural land, minerals, fossil fuels, and solar energy.

Extensive petroleum recovery operations and agriculture predominate the Coalinga area. A brief discussion of these resources are included in Part II: Planning Context and Related Documents, Sections D-5 and D-6. Historically, coal has been mined from the area; however, no coal mining operations are presently in existence or are anticipated in the future. No significant timber harvesting operations exist in this region. Given the area's climate, solar energy has potential as a possible energy source on a small scale

Threshold for Determining Significance of Natural Resource Impacts

Impacts on natural resources are considered significant if the project will result in substantial depletion of natural resources locally or regionally.

According to CEQA Guidelines, "a project will normally have a significant effect on the environment if it would convert prime agricultural land to a nonagricultural use or if it would affect the agricultural productivity of prime agricultural land." (Appendix G of the CEQA Guidelines)

Potential Significant Environmental Effect

As development occurs in accordance with the proposed General Plan, non-renewable energy, water, and materials resources will be consumed by increased vehicle travel, and heating and cooling of living and working spaces. New construction will involve the use of additional building materials and natural resources. The materials used in construction are not considered to be limited, and substantial quantities of those materials are readily available. These materials include wood, concrete, rock, brick, steel, etc.

Consumption of natural resources after building construction does not represent a unique or substantial increase in the rate of consumption of these resources. The use of these resources is not considered a significant portion of the available resources, and such impacts are less than significant.

3.9 RISK OF UPSET (HAZARDOUS MATERIALS/URBAN AND WILDLAND FIRES)

Environmental Setting

This section considers the risks associated with exposure to hazardous substances from present or past activity; accidental release of hazardous substances during use or transport in the event of upset conditions; and urban and wildland fires. A complete discussion of hazardous materials and other upset conditions are included in *Part III: Planning Context*, Section F-5.

Threshold For Determining Significance For Hazardous Materials Impacts

Hazardous materials impacts are considered significant if the proposed project will result in an unusual or unique risk of explosion or in the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of accident or upset conditions, or if the project will increase the risks associated with urban or wildland fires.

Potential Significant Environmental Effects

Hazardous Materials Based on information included in *Part III: Planning Context*, impacts related to use, storage and handling generally are considered less than significant. With regard to exposure especially during construction activities, this impact could be considered potentially significant; however, complete remediation of contaminated development sites will be required prior to development. This impact is therefore considered less than significant with adequate mitigation.

Urban and Wildland Fires Based on information included in *Part III: Planning Context*, Section F-4 Fire Safety, fire safety impacts are considered less than significant due to required building code enforcement and proposed water storage improvements.

Mitigation Measures

State and federal requirements regarding remediation of contaminated soils prior to development activities will mitigate site specific impacts associated with contaminated soils.

3.10 POPULATION/HOUSING

Environmental Setting

Population

The City of Coalinga incorporated in 1906 and has experienced modest population increases over the years. In the period from 1970 through 1980, the City increased its population by 7% to 6,590 persons. The City has continued to grow since 1980. Between 1980 and 1990, the City's population grew by nearly 1,620 persons, an annual increase of 2.5%. As of January 1, 1994, the population of the City was estimated at 9,500 people.

Employment

One of the largest employers in the community is agriculture. Fresno County is the leading agricultural county in the United States producing a wide variety of crops on nearly 2 million acres. Annual production generates close to \$2.5 billion in gross receipts.

The City of Coalinga employs a farm labor force of 18.5 percent, compared to the County average of 11.8, according to the U.S. Census.

The oil industry is also a major employer (200 persons in 1990).

In addition to agriculture, retail trade and education have large numbers of employees, representing 36% of the total employment base. Moreover, the construction industry employs an additional 8.5% of the employment base.

Housing

A review of census data indicates that Coalinga's housing stock expanded by 766 units during the period of 1980-1990. Data reveals that the number of dwelling units increased from 2,457 in 1980 to 3,223 in 1990, an average annual increase of 76 units and 3.1%. Existing housing is estimated at 3,400 units.

Although the predominant housing type continues to be the conventional single-family residence, its predominance has been steadily decreasing. Single-family residences comprise approximately 69% of the total housing stock.

3.11 TRANSPORTATION/CIRCULATION

Environmental Setting and Potential Significant Environmental Effects

A complete discussion of transportation/circulation issues is found in Appendix B, 1994 Traffic Report; in addition, see Part III: Planning Context C-1, Circulation, pg. C-1 and Part I: Coalinga Plan 2015, Map 4 Roadway Plan and Street Section Standards, Map 5 Bikeways and Trails, Standards 1 Bicycle and Trails Standards.

Threshold for Determining Significance

Impacts on roadways are considered significant if a change in Level of Service (LOS) to D, E or F occurs as a result of development levels anticipated at buildout under the plan.

Mitigation Measures and Significance After Mitigation

The 1994 Traffic Report (Appendix B, pg. 21) calls for several intersection and street improvements. Transportation/circulation impacts are less than significant after mitigation.

3.12 PUBLIC SERVICES

Environmental Setting

This section considers the public services available to City residents. *Part III: Planning Context* contain detailed information on available public services, including fire protection, police protection, and schools.

Threshold For Determining Significance For Fire Protection, Police Protection, and School Services Impacts

Fire Protection. Fire protection services impacts are considered significant if the proposed project's demand were to exceed the limits of existing or planned facilities or personnel intended to provide fire protection services.

Police Protection. Police protection impacts are considered significant if development will exceed current or proposed levels of protection.

School Services. The proposed project would have significant impacts on school services if student enrollment would increase beyond the current or planned District's capacities.

Potential Significant Environmental Effects

Fire Protection

Additional projected development within the planning area in accordance with the General Plan will result in increased fire protection needs in order to maintain adequate fire protection and services.

Based on the information contained in *Part III: Planning Context*, fire protection services impacts are considered potentially significant. This is primarily due to emergency water supply storage requirements.

Police Protection

Additional growth anticipated in the General Plan has the potential to increase the amount of patrol requirements and response demand of the Police Department.

accommodate new students. The District also collects funding from the state and will continue to introduce bond measures to voters which would authorize the sale of tax exempt bonds, certificates of participation or other form of tax exempt financing, for the purpose of the financing new school construction.

3.13 ENERGY

Energy issues of concern include the potential for use of substantial amounts of fuel or energy, substantial demand on existing sources of energy, and requirements for development of additional sources of energy.

Environmental Setting

Energy is used throughout the City for a variety of functions. Electric power is used for lighting, air conditioning, appliances, and small motors and industrial processes. Natural gas is typically used for space heating, water heating and cooking. Gasoline and motor oils are predominantly used for engines, such as those in automobiles, and those which run industrial processes. The construction of building and structures also requires energy in materials manufacture.

A discussion of natural gas systems serving the City are included in *Part III: Planning Context*.

Threshold for Determining Significance of Energy Impacts

Impacts on energy systems are considered significant if there is a substantial increase in the demand upon existing sources of energy, or if the project requires the development of new sources of energy.

Potential Environmental Effects

Development occurring in accordance with proposed land use policy will require substantial amounts of energy for the manufacture of building materials and for the construction of structures and public improvements. The energy requirements for this aspect of development, although substantial, will terminate upon construction completion.

New development will result in increased electrical and natural gas supplies compared to existing conditions. Housing development over the 20-year time frame of the General Plan generally will double the number of existing housing units. Although this will increase energy demands and will require additional supplies compared to existing conditions, the amount of increase will not substantially impact existing resources.

Based on this information, energy impacts associated with new development within the City are considered adverse, but can be substantially lessened with appropriate conservation measures.

3.14 UTILITIES

Environmental Setting and Potential Significant Environmental Effects

A complete discussion of utility systems is presented in Part III: Planning Context, pg. C-4; in addition, see Part I: Coalinga Plan 2015, Map 7 Major Utility and Service Lines, Map 8 Water Service Area and Map 9 Water Storage and Significant Metering.

Thresholds for Determining Significance

Impacts on utilities are considered significant if future development anticipated at buildout under the General Plan exceeds the existing or planned service capabilities of the various utility purveyors.

Mitigation Measures and Significance After Mitigation

See Part I: Coalinga Plan 2015, Infrastructure/Circulation Policies, pg. 31. Utility impacts are less than significant.

3.15 HUMAN HEALTH

Environmental Setting

Human health issues of concern are the creation of potential health hazards and exposure to potential health hazards. Health hazards generally can be grouped into two categories: those resulting from natural hazards and those occurring as a result of man-made actions. Natural hazards can include earthquakes, flooding, and other geologic hazards. Man-made hazards include major transportation accidents, fires, and exposure to disease.

Seismic and other geologic hazards, and flooding hazards have been discussed previously in Sections 3.1 and 3.3, respectively.

Other sources of health hazards are those transmitted by vectors such as flies, mosquitos, or rodents. These vectors thrive in areas that provide suitable habitat (i.e., standing water, abandoned structures, ivy, fields, etc.). Given the variety of vegetation communities, undeveloped parcels, and open water channels present, small rodents and mosquitos are likely.

Thresholds for Determining Significance of Human Health Impacts

Impacts are considered significant if the project will create unavoidable, health hazards or expose people to potential health hazards.

Potential Significant Effects

Development in accordance with proposed land use policy does not pose any unusual or unique human health concerns. Construction or occupation of structures is not expected to expose people to additional health hazards such as disease beyond those already found within the area.

This impact is considered less than significant.

Mitigation Measures

No additional mitigation measures are required or recommended.

Level of Significance After Mitigation

Human health impacts are less than significant.

3.16 AESTHETICS

The term "aesthetics" in the context of this EIR is not intended to connote a subjective judgement of taste. Primarily, it refers to structures that block vistas of the surrounding topography or the visual compatibility of structures with each other. Issues of concern in considering aesthetic effects of a project include potential obstruction of scenic views or vistas open to the public and the creation of aesthetically offensive sites open to public view. The visual characteristics of structures, as well as their form and mass, surface articulate, materials, finishes and colors also are of concern.

Environmental Setting

The aesthetic environment of Coalinga can generally be described as rural with undeveloped surrounding hills to the west, agricultural uses to the northeast, east and south, and relatively low density residential development. Both the Los Gatos and Warthan Creek channels both provide visual corridors.

Threshold for Determining Significance of Aesthetics

Significant impacts will result if the project will result in a substantial or potentially substantial adverse change in any physical conditions with aesthetic significance, such as the loss or obstruction of an existing public view or vista, the creation of an offensive site visible to the public, or substantial adverse change to the visual character of the area.

Potential Significant Environmental Effects

Development on currently undeveloped parcels will introduce additional structures to the area. Given the relatively flat topography and surrounding agricultural uses, any new development is not expected to result in an overall loss of substantial views or vistas open to the public. No high rise or massive structures are contemplated. The loss of some views to higher intensity development may be considered adverse by some; however, because no substantial public views are expected to be completely eliminated, this impact is not considered significant. In order to substantially lessen potential visual obstructions, all structures will be subject to design review by the City.

Mitigation Measures

Standard design review for all development projects will substantially lessen potential impacts to less-than-significant levels.

3.17 RECREATION

Environmental Setting

Part III: Planning Context describes the recreation facilities and programs available to Coalinga residents. Briefly, recreation services are provided by the Coalinga-Huron Recreation and Park District throughout the cities of Coalinga and Huron, and the surrounding rural areas.

Threshold for Determining Significance of Recreation Impacts

Impacts on recreation facilities are considered significant if the project creates a demand for recreation services which substantially exceeds the design or use standards of existing or planned facilities.

Potential Significant Environmental Effects

Implementation of the proposed land use policy will increase the City's population over the 20-year timeframe of the General Plan, which will likely increase the demand for recreational opportunities. Continued development and population growth within the City's Sphere of Influence will make it increasingly difficult for the City to acquire, develop, and maintain additional park and recreation facilities.

The Land Use Element of the General Plan includes recreation facilities designation to ensure that recreation opportunities will continue to be provided to City residents. This impact is considered potentially significant but can be mitigated substantially.

Mitigation Measures

Relevant General Plan policy include: Land Use Element Policy 4.

Level of Significance After Mitigation

The goals and policies included in the proposed General Plan will substantially lessen impacts on recreational resources to less-than-significant levels.

3.18 CULTURAL RESOURCES

Environmental Setting

Part III: Planning Context briefly describes the existing cultural setting in the city.

Thresholds for Determining Significant for Cultural Resources Impacts

Impacts on cultural resources are considered significant if a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group is disrupted or adversely affected.

Potential Significant Effects

New development in accordance with proposed land use policy, especially on undisturbed parcels, may have an impact on known or previously undiscovered archaeological resources. In areas where extensive agriculture has occurred, the potential for finding significant archaeological resources is considered very remote.

Mitigation Measures

Development should seek to avoid damaging effects on archaeological resources wherever feasible. Should such resources be discovered and avoidance prove not feasible, the importance of the site shall be evaluated by a qualified archaeologist. Mitigation measures included in Supplementary Document J of the *CEQA Guidelines* shall be incorporated into the project should these conditions occur.

Level of Significance After Mitigation

With implementation of these mitigation measures, including those included in Supplementary Document J of the *CEQA Guidelines*, impacts on cultural resources will be substantially lessened to less-than-significant levels.

4. ALTERNATIVES TO THE PROPOSED PROJECT

CEQA Guidelines require that an Environmental Impact Report describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project, and evaluate the comparative merits of these alternatives (Section 15126[d]).

A number of land use options were investigated as part of the General Plan development process to determine a reasonable level of future development. After determining a reasonable level of development, the City investigated its land and the surrounding area of interest to identify potential areas that could accommodate projected future development. During that phase a number of locations were identified, any of which included adequate land available to accommodate projected growth.

Based on these growth expectations, six general growth areas were identified that could accommodate the necessary level of development to support the projected population. Only one growth area is required to serve the anticipated population. The City will decide which growth area, or combination of portions of growth areas, will be most appropriate. By discussing some alternatives which represent General Plan policies, the impacts of the choices which are less extreme may be anticipated without specifically analyzing these alternatives in great detail.

The six growth areas (see Figure 4.2) include:

- **Growth Area 1 - East Coalinga Annexation Area (723 acres or 1.13 sq. mi.):** This area is directly east of the existing city limits. Its main existing roads are Phelps Avenue on the northern boundary and Polk Street (Highway 33) on the southern boundary. Land use plans and environmental analysis have already been prepared for this growth area.
- **Growth Area 1a - West Hills College Agricultural Area (154 acres or 0.24 se. mi.):** Located in the eastern portion of Coalinga, this area is currently utilized by West Hills College as part of its agricultural program. It is adjacent to the East Coalinga Annexation Area. Although any future use of this land remains undecided, it may become available for new development.
- **Growth Area 1b - Monterey Avenue Development Area (430 acres or 0.75 se. mi.):** Located in the western portion of the City, this area was recently annexed to the City and is being developed with very low density single-family residences.

- **Growth Area 2 - Elm Street Area (954 acres or 1.49 se. mi.):** This area is north of the established city core and includes the old municipal airport land. Elm Street (Highway 198/33) runs north-south.
- **Growth Area 3 - Merced Avenue Area (1,039 acres or 1.62 se. mi.):** This area generally is south of Polk Street and is bisected by Merced Avenue, which runs north-south.
- **Growth Area 4 - Phelps Avenue Area (934 acres or 1.46 se. mi.):** Phelps Avenue runs east-west through this growth area.

The boundaries of any one growth area are not absolute; they suggest potential areas of approximately 1.5 square miles each which meet the assumptions and conclusions assumed in the proposed General Plan. For example, each growth area is adjacent to the historical core of Coalinga and takes advantage of existing roadway patterns, utility infrastructure, commercial areas, and recreational opportunities. The growth area may be expanded slightly over time, for example, to provide more land for schools, recreation, shopping, open space, or, if the average residential density decreases, housing. In general, each growth area "folds" around or connects developed areas of Coalinga. Leap-frog development is strictly discouraged.

The following discussion considers these alternative growth areas for the City, including the impacts associated with development of each growth area. Through a comparison of these alternatives to the proposed project, the advantages of each can be weighed and analyzed. State *CEQA Guidelines* require a range of alternatives "governed by rule of reason that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice" (Section 15126[d]).

It is not the purpose of the General Plan EIR to discuss in detail the impacts of site-specific proposals or alternatives but to deal primarily with the overall cumulative impacts of the proposal. Additional environmental review may be required for specific developments. This later review should emphasize project specific and site specific impacts and mitigation measures.

Alternative 1: "No Project"

The "no project" alternative has been considered by some courts to be the appropriate "no development" alternative under CEQA for comparison purposes. This alternative considers existing conditions only, with no allowance for additional development to take place in the planning area. The "no project" alternative has been analyzed throughout this document as the "environmental setting" scenario.

This alternative would result in no further impacts on the physical environment than those that have already occurred, or are occurring, such as those associated

TABLE 2
CITY OF COALINGA
UTILITY AND PUBLIC SERVICE NEEDS FROM ADDITIONAL GROWTH*

Issue Area	Impacts/Needs
Traffic	8,915 Average Daily Trips
Wastewater	187,535 Gallons Per Day
Water	656,055 Gallons Per Day
Solid Waste	4,920 Pounds Per Day
Schools	455 Students
Police	3 New Officers Needed
Fire Station	1 New Station Needed

* This table shows additional growth effects of adding 6,800 residents over the next 20 years.

Flooding

The Federal Emergency Management Agency (FEMA) is restudying flood hazards within the city limits and officially withdrew the Coalinga maps in 1982. Map 11 illustrates the rescinded FEMA map area and depicts where the 100-year flood might encroach on adjacent areas. In addition, the 1983 earthquake may have changed the slope of the stream channels, or altered flooding patterns. For an accurate picture of existing and future flooding potential, revised FEMA maps are essential. Preliminary maps are being made available over the coming weeks and may alter the conclusions of this section.

Growth Area #1: The Warthan and Los Gatos Creeks flow out of the southern hills of the Diablo Range and converge at the eastern edge of the Coalinga city limits in Growth Area # 1. The FEMA maps indicate that the 100-year flood will affect properties aligning these creeks. However, flooding is limited to a maximum distance of 1500 feet from the creeks.

An environmental impact report (EIR) was prepared to evaluate development within this area. This EIR contains mitigation measures to ensure that persons and property are protected from the 100-year flood.

Growth Area #1A: The FEMA maps for this growth area indicate that the southeastern portion are within the 100-year flood plain.

Growth Area #1B: This area is not impacted by flooding.

Growth Area #2: The 100-year floodplain encompasses a significant proportion of Growth Area 2. According to the FEMA map, three

where the existing processing plant is located. As a result, lifts would most likely be needed to transport the wastewater from this area.

Because Growth Area #4 is located east of the City, this growth area is considered to have a greater impact on sewage treatment facilities than other growth areas. However, this impact can be reduced with the construction of lifts or relocating the sewage treatment facility. A report entitled *Evaluation of Wastewater Treatment Plant Expansion Report* indicates that the City is considering the relocation of the existing treatment facility to two different sites in the eastern planning area, however, relocating to these sites does have some disadvantages.

First, the site south of the new airport facility has some distinct disadvantages from a conveyance point of view. The existing wastewater facility lies south of Los Gatos Creek, meaning that all of the existing gravity sewers and force mains would have to cross the creek to convey the existing wastewater flow to the new facility. Additionally, the general topography of the area does not lend itself to gravity flow. The influent sewer to the plant would either have to be a force main or a deep sewer from which the wastewater would have to be pumped up to the headworks.

Another site at the Calaveras Avenue and Jayne Avenue intersection has been identified. Although this location would be detached from the future airport facility, the site would be more advantageous since it lies south of Los Gatos Creek. Existing wastewater flows which comprise the majority of the sewage could be conveyed by gravity along Jayne Avenue, while the minor flow from the airport would be transported in the only conduit that would have to cross the creek. However, it also is on existing farmland which could result in higher land costs. When considering effluent disposal options, the fact that the site is being farmed currently may provide an opportunity to reclaim the treated wastewater by selling it to the adjacent farmers.

Traffic/Circulation: The circulation system in Coalinga generally operates efficiently with only occasional delays or congestion. A study of the City's existing traffic conditions, conducted by Fehr & Peers Associates, indicates that the majority of intersections studied in 1993 were operating at a Level of Service (LOS) A, meaning that traffic was uncongested and drivers experienced little or no delay. Some intersections were reported to operate at an LOS lower than A. However, these intersections were still considered to be operating within acceptable levels.

The Existing Traffic Conditions Report identifies the existing two Caltrans bridges as the primary constraints to new development. The first bridge, on S.R. 198/33 near Phelps Avenue on the north side of town, currently has a peak-hour volume of approximately 445 vehicles per hour (vph). According to the Highway Capacity Manual, the threshold for a two-lane rural highway operating at a LOS

Alternative 3: Increased Population Projection

This alternative considers additional development necessary to support a projected buildout population of approximately 25,000 persons. An ultimate population of 25,000 people is approximately 8,700 more persons than proposed in the General Plan. Additional residential development beyond that proposed in the General Plan would be necessary to accommodate this increased population. Assuming similar persons per household figures, an additional 3,100 units would need to be constructed.

The precise location of additional units cannot be determined at this time, although sufficient developable land exists. This scale of additional development would require some level of special conditions, such as a self-contained residential community.

Table 3 summarizes the impacts and the needs of this additional development anticipated to occur under this development scenario. This table can be compared with projected impacts anticipated under proposed General Plan buildout shown in Table 2.

TABLE 3
CITY OF COALINGA
UTILITY AND PUBLIC SERVICE NEEDS FROM ADDITIONAL GROWTH*

Issue Area	Impacts/Needs	
Traffic	20,320	Average Daily Trips
Wastewater	427,470	Gallons Per Day
Water	1,495,420	Gallons Per Day
Solid Waste	11,215	Pounds Per Day
Schools	1,037	Students
Police	7	New Officers Needed
Fire Station	2	New Station Needed

* This table shows additional growth effects of adding 15,500 residents over the next 20 years.

As shown in this table, a population increase of this magnitude would result in substantial increases in utility and public service needs compared to the proposed General Plan.

Accommodating this increase in population is possible with regard to land availability; however, this level of development would create additional environmental concerns. The City's water supply becomes a limiting factor with regard to future population increases. Residential land uses adjacent to agricultural land uses are incompatible due to pesticides, dust, and other agricultural effects.

5. LONG-TERM EFFECTS

For environmental impact reports on public plans, ordinances, or policies, CEQA requires the EIR to include a discussion of cumulative and long-term effects on the environment. Special attention is to be given to impacts which narrow the range of beneficial uses of the environment or which pose long-term risks to health or safety from natural or man-made occurrences. The reasons why the project is considered to be justified now, rather than reserving an option for future alternatives, should be explained.

5.1 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Development in accordance with the proposed General Plan represents a long-term commitment to use city lands for those urban and natural uses outlined in the plan. Development of these uses in general would preclude returning the developed area to its previous lower intensity state (e.g., agricultural land). Development for one use in general precludes development for another use except at substantially greater intensity because of the high cost of removal of existing uses.

The proposed General Plan is considered justified for the following reasons:

- Substantial development demand for the proposed uses exist in the planning area. In general, if public concerns or external effects do not indicate otherwise, response to development demand can be expected to result in an efficient allocation of resources in the region.
- The proposed plan is, in general, consistent with regional plans for the area because it includes policies and programs to keep the City's development consistent with other regional plans.
- The plan includes citywide mitigation measures in the form of goals, policies, and implementation measures which substantially lessen the potential impacts on the environment and on urban systems of the proposed development.
- The plan includes project-level mitigation measures which substantially reduce the potential impacts on the environment and on urban systems, including additional development review at the project level.

5.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

This section considers the ways development in accordance with the proposed land use policy could encourage economic or population growth, either directly or indirectly.

Proposed land use policy is specially intended to provide for the orderly growth of Coalinga and to define the ultimate limits to that growth. Adoption of the General Plan does not so much induce growth as it accommodates growth and provides the mechanism to control it.

Implementation of the General Plan will lead to a modest increase in the City's residential population and will lead to continued development and new types of growth in the commercial and business park sector. This growth will place greater demands on public infrastructure and services.

The environmental effects related to individual projects will be assessed when such projects are proposed. At that time, the City will impose conditions designed to reduce environmental effects if those conditions are necessary. Regular updating of the General Plan and General Plan EIR will assist in the early identification of necessary mitigation measures.

Economic Growth. The proposed land use policy provides for increases in commercial, office and industrial opportunities for the City. This development would also provide local services, modernize the industrial base, and generate an increased tax base for the City. Increased development would create employment opportunities for residents of all skill levels, contributing to the area's economic and fiscal growth.

Housing Growth. Residential development will continue to expand into the agricultural areas to the east, thereby providing additional housing for some employees generated by new non-residential development.

Population Growth. Implementation of land use policy described in the General Plan would result in increases to the City's population.

Public Facilities. Development in accordance with proposed land use policy would require additional expansion and improvement of public facilities, utilities and services to accommodate increased demand. These improvements will be implemented over time in accordance with the General Plan's policies and programs. Some may be constructed or expanded prior to new development, while others may be constructed or expanded concurrently with new development.

Cumulative development throughout the area may result in impacts in the following issue areas:

- | | |
|-------------------------------|--------------------------------|
| 1. Earth | 10. Population/Housing |
| 2. Air | 11. Transportation/Circulation |
| 3. Water Resources | 12. Public Services |
| 4. Biological Resources | 13. Energy |
| 5. Noise | 14. Utilities |
| 6. Aesthetics/Light and Glare | 15. Human Health |
| 7. Land Use | 16. Recreation |
| 8. Natural Resources | 17. Cultural Resources |
| 9. Risk of Upset | |

The cumulative impacts associated with potential development in conjunction with the proposed project are discussed further below.

1. Earth

Development throughout the area involves a wide variation in terrain characteristics and slope gradients. Projects may require minimal grading in the flatter areas to moderate to extensive grading in the more hilly terrain. Short-term grading impacts can be mitigated to an acceptable level using currently available technologies, and are considered less than significant. Those projects slated for development in the more hilly terrain will cause permanent modifications to the existing topography.

Much of the central California region is considered a seismically active area as evidenced by the abundance of active, potentially active and inactive fault traces that traverse the region and have significantly damaged structures and property in the recent past.

Development projects in and around the city will expose additional people and structures to groundshaking from an earthquake. Any groundshaking that may occur would be expected to be similar throughout the area, and no unusual or unique risk is posed by development.

The Uniform Building Code requirements regarding seismic design considerations for all new structures will be enforced through review of plans and inspections of structures during construction.

Mitigation measures similar to those included in Section 3.1 could be applied to additional development in the area. Additional mitigation measures may be required at the project level for site specific impacts. These mitigation measures will substantially lessen cumulative impacts to less than significant levels.

severe storms. Appropriate mitigation measures at the project level would substantially lessen this impact to a less than significant level.

4. Biological Resources

Coalinga and the surrounding area contains a variety of vegetational communities which support substantial wildlife populations. Continued development throughout the City in addition to projects outside the City will result in the irretrievable conversion of a portion of these habitats to urban uses.

Cumulative development would also eliminate the majority of wildlife currently existing on the various project sites. Given the current habitat available on a given site and the surrounding area, development of these sites could adversely impact wildlife populations and diversity.

Development of these sites would also reduce the forage area for the significant raptorial population in the region. Because biological conditions are unique to each site, site-specific mitigation measures will need to be developed.

5. Noise

Noise in the Coalinga area is generated primarily from vehicular traffic along the major roadways in the vicinity. Stationary sources also produce noise in the area; however, their contributions to ambient noise levels are relatively minor.

Cumulative development will result in increased vehicular traffic on the local roadways. This additional traffic will cause noise levels along these routes to increase. Where incompatibilities exist between noise-sensitive land use and roadways which generate noise levels in excess of local standards, the cumulative impact of increased noise could be potentially significant.

Construction related noise impacts may exceed acceptable levels and will have potentially significant impacts on nearby noise-sensitive land uses. Construction noise is relatively short-term and will terminate upon project completion. For this reason, construction noise impacts are considered less than significant.

Increased population and development would result in increased noise from a variety of sources commonly found in urban environments (i.e., human activities, mechanical equipment, pets, etc.). These sources are neither unique nor unusual and are considered to be less than significant.

Construction noise impacts can be reduced through implementation of measures similar to those outlined in Section 3.5 Noise. On the long-term, goals and policies contained in the City's General Plan are expected to provide adequate mitigation.

use of building materials derived from such natural resources as forest products, gravel, metals and other minerals.

For the most part, the cumulative consumption of natural resources is not considered a significant impact since supplies of most materials are abundant and readily available. Measures which provide for conserving energy and water, for reducing solid waste, and for biological resources can be expected to lessen individual project consumption of renewable and nonrenewable natural resources.

9. Risk of Upset

Among cumulative development, industrial uses may result in an increase in the use, storage, and transport of hazardous materials. These materials may be stored in underground tanks. Storage in underground tanks can potentially lead to soil contamination in the event of a leak. Surface materials can also be accidentally released into the environment.

Cumulative development in general does not represent an unusual or a unique risk of explosion or release of hazardous substances beyond that risk typical of other similar uses. Designated uses allow for industries that may use, store, or transport hazardous materials. These developments themselves do not represent an unusual risk beyond that risk typical of other similar commercial, office, or business park developments.

The amount of hazardous materials to be used and/or generated will depend on the types of industrial development ultimately allowed. Compliance with all federal, state and local hazardous materials regulations will reduce the likelihood of chemical spills, explosions, and other forms of toxic materials release. With such measures, hazardous materials related impacts will be adverse but less than significant.

Much of the vegetation in the surrounding hillside areas contains highly combustible brush and chaparral considered a high fire hazard. Development projects located in the outlying areas will expose additional population and property to potential fire hazards. In the event of a major brush fire in these areas, property damage and personal injury could occur where residences border the area of potential hazard. Local weed abatement and fuel modification programs will lessen hillside fire hazards.

Those projects which are located in urbanized areas have considerably less exposure to flammable native vegetation and are not likely to be impacted by wildland fires. However, all development is susceptible to fire damage to some degree because of potential accidents, disasters and arson. Fires in these developments tend to be suppressed much more quickly than hillside structures ignited by intense fast-moving brush fires. Maintaining fire protection services at acceptable levels will substantially lessen this impact.

junior high and high school aged children. Increased development within the next five years is expected to generate sufficient demand for an additional elementary school.

To the extent there is an increase in average daily attendance, state funding, which is based on average daily attendance, would also increase. The Coalinga-Huron Unified School District has the ability to levy development fees under AB2926 for commercial, office and residential projects to provide additional funding for expanded educational facilities. Expanded facilities, funded in part through development fees, would provide some mitigation. However, funding from this source typically does not cover all costs associated with expansion, and additional sources of funding will be required.

13. Natural and Energy Resources

Cumulative development will result in increased consumption of nonrenewable energy resources due to additional vehicle usage, heating and cooling of living and working spaces, and electrical generation at power plants. Water and other generally renewable or recyclable natural resources also will be consumed at an increased rate because of further development. New construction will involve the use of building materials derived from such natural resources as forest products, gravel, metals and other minerals.

Petroleum extraction is one of the most economically valuable natural resources in Fresno County. Petroleum extraction occurred in the region for over 80 years with the most productive wells concentrated in the Coalinga area.

For the most part, the cumulative consumption of natural resources is not considered a significant impact since supplies of most materials are abundant and readily available.

Measures which provide for conserving energy and water, reducing solid waste, and preserving other biological resources may lessen individual project consumption of renewable and nonrenewable natural resources.

Future residential development will extend east (the East Coalinga Annexation) and north (north of Phelps Avenue) into land presently under agricultural production. Some of these lands are operated under the Williamson Act. Williamson Act lands generally are considered prime farmland. Conversion of these lands to residential uses will result in the ir retrievable commitment of these lands to urban uses. Although the amount of land to be converted is a small portion of the overall prime farmland present in the county, development on prime farmland is considered a significant adverse impact. In areas that are not considered prime farmland or under Williamson Act contracts, development impacts are not considered significant.

Cumulative development will increase the amount of solid waste generated in the area and delivered to the Coalinga Disposal Site. This increase in solid waste will incrementally decrease the life expectancy of this landfill. Responsible jurisdictions will establish waste reduction/recycling programs that require all residential development to establish source separation for recyclable materials in order to achieve the requirements of AB 939, which will likely increase the life expectancy of this disposal site.

15. Human Health.

Health hazard sources typically include vectors such as flies, mosquitos, and rodents, all of which thrive in areas that provide suitable habitat for their existence. Given the broad geographic area included in this cumulative development section, some vector habitats are expected. However, these habitats are expected to be relatively minor; therefore, the exposure of additional population to disease-bearing vectors is less than significant. Implementation of local and county health department policies and regulations will ensure that vector-related health hazards are minimized.

Another public health issue of concern in Coalinga is the presence of asbestos. Asbestos is a naturally occurring substance in the local serpentine formation. At one time, it was mined in the outlying foothills west of the City.

"Valley Fever," an endemic disease in the Central Valley, causes a debilitating illness and sometimes death. It is a mycosis caused by the fungus *coccidioides immitis*.

16. Recreation

Cumulative development in the area will increase the local population and demand on existing recreational facilities. Development of additional parkland will be necessary to provide adequate recreational opportunities for the increased population. This can be achieved through development requirements such as park in-lieu fees, dedications, and other funding and/or development programs.

17. Cultural Resources

The region in general has a moderate to high potential to contain archaeological resources of significance. Grading operations associated with development may have an adverse impact on these resources. If archaeological resources are identified on any development site, the City will implement appropriate mitigation measures as outlined in Appendix K of the CEQA Guidelines.

With regard to paleontological resources, this general area is considered to have a low fossil bearing potential. However, in the event paleontological resources are discovered, the City will implement appropriate mitigation at the project level.

APPENDIX B

CITY OF COALINGA

CIRCULATION REPORT

July 1994

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INTRODUCTION

BACKGROUND

The Circulation Report is a mandated element of the City General Plan. Its function is to guide the development of the circulation system in a manner that is compatible with the land use element.

Because the future growth of the City, by the year 2015, will add significant vehicular trips to the circulation system the City's roadways will experience increased capacity demands. A well-planned circulation system is important, therefore, to help meet these demands and achieve balanced growth.

The City has adopted specific goals and policies which serve as the basis for the circulation report.

PURPOSE

The purpose of the Circulation Report is to provide for the safe and efficient movement of people and goods to and within the City of Coalinga and to insure safe and continuous access to land. The current state mandate for a circulation report states that the general plan shall include:

".....a circulation element consisting of the general location for proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan."

To meet these objectives, the Circulation Report addresses improvement projects which will be needed to relieve traffic congestion due to future land uses. Corresponding goals and policies have been adopted to ensure that all elements of the circulation system will meet the needs of the City of Coalinga.

This circulation report establishes a hierarchy of roadways within the City and defines specific development standards for each of the three categories (arterial, collector and local streets).

The maps on the following two pages locate the City of Coalinga with respect to the central California area and reflect the existing Coalinga urban area.

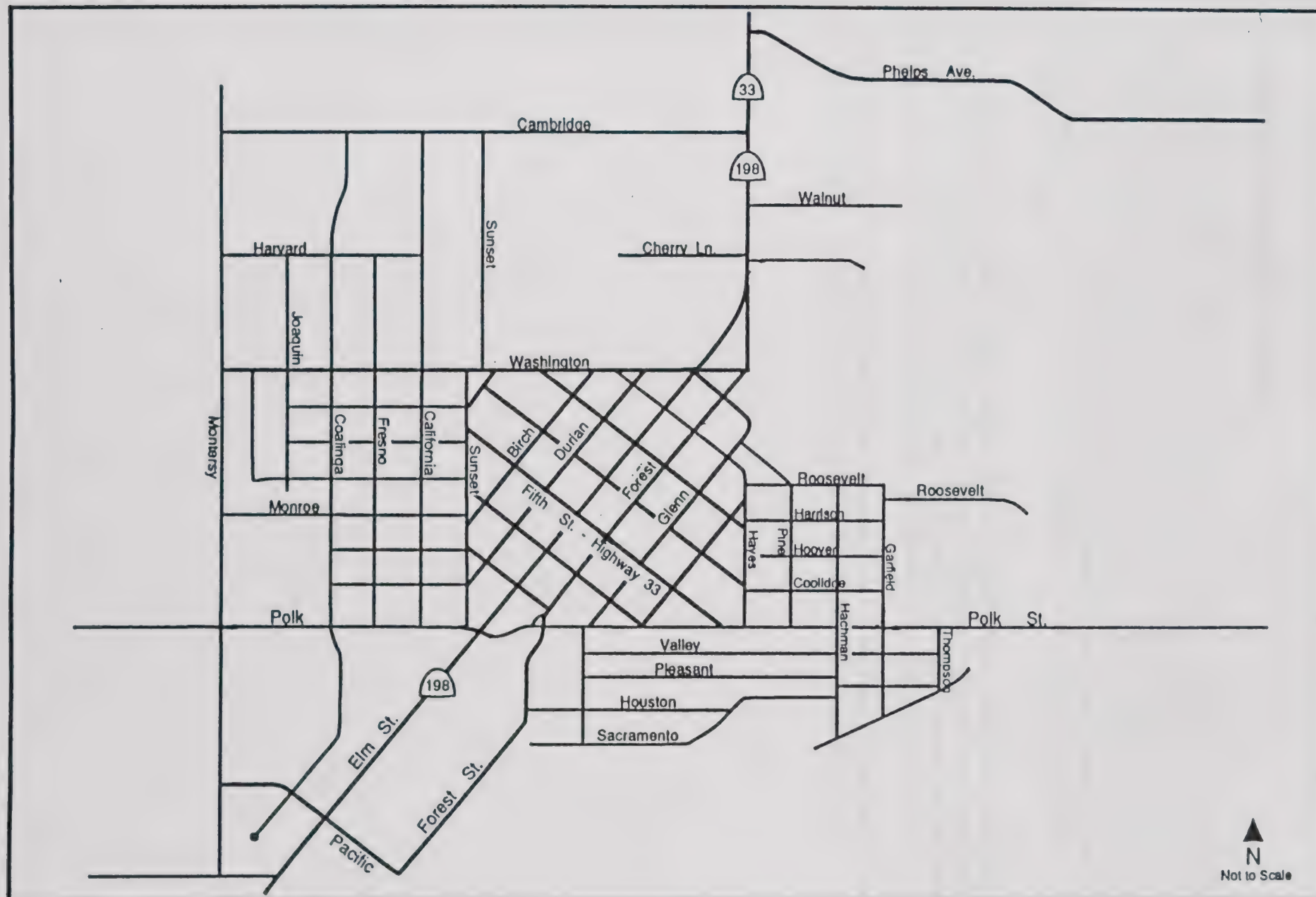


FIGURE 2

PROJECT VICINITY MAP

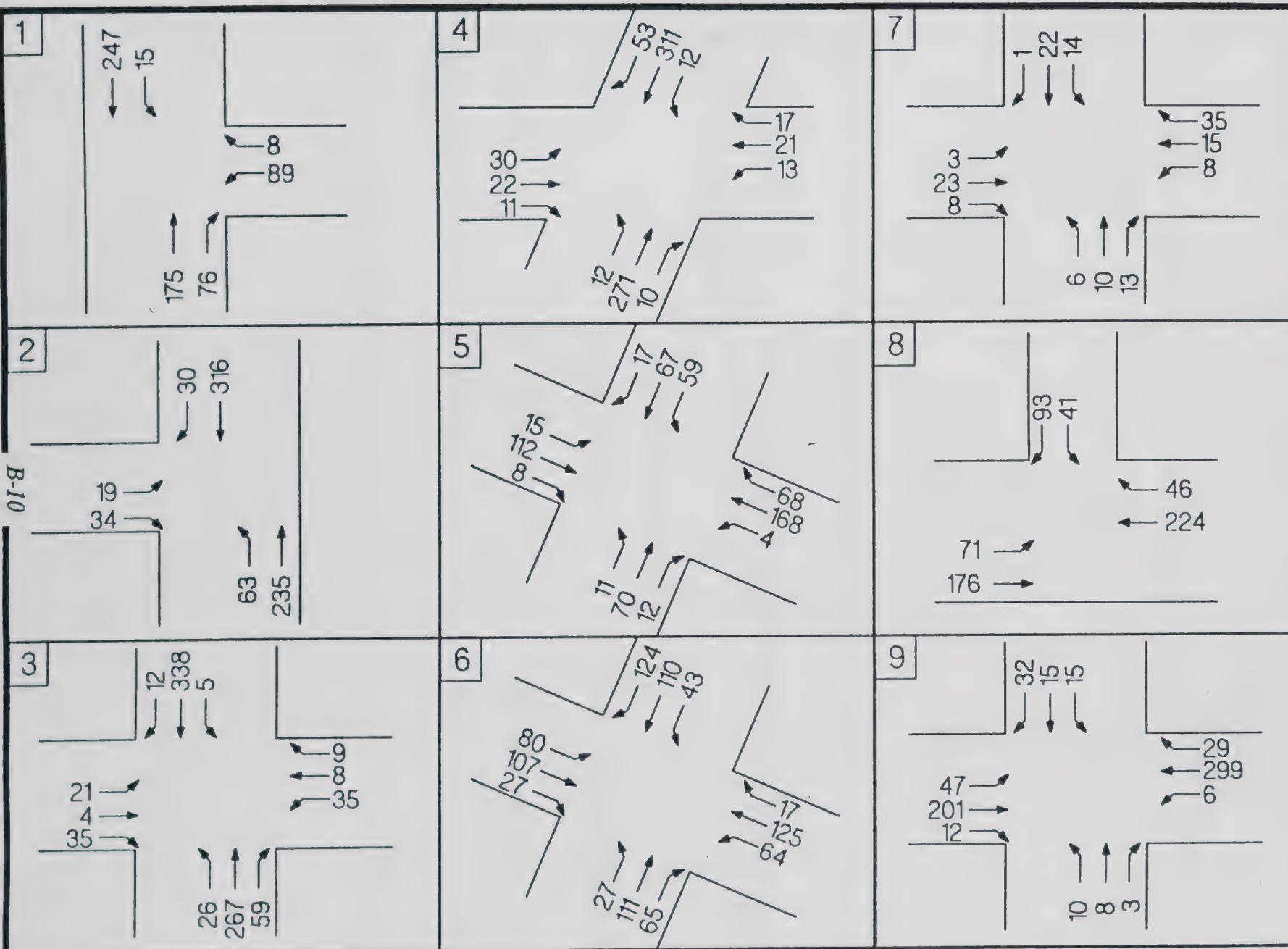
Robert N. Trout, P.E.

EXISTING CONDITION ANALYSIS

An existing conditions report was prepared in December 1993 by the transportation consulting firm of Fehr and Peers Associates, Inc. The consultant evaluated existing transportation conditions (principally nine typical or representative city intersections), identified potential constraints to future growth (such as two existing two lane bridges at the City's north and east gateways) and analyzed traffic characteristics through an origin-destination survey. Results, of the existing condition analysis report which is included in the appendix, were then used as the foundation or basis for the preparation of this Circulation Report.

In addition to the existing condition report traffic volume counts were obtained by city staff for 23 city street segments. Volumes on 12 state highway segments were obtained from CALTRANS. Observations were made on bicycle use, pedestrian routes, habits, operation and safety in the vicinity of public schools. Limited transit use was documented.

The exhibits on the following three pages represent existing intersection geometrics, existing intersection traffic volumes and existing link, or segment traffic volumes.



SCALE: N.T.S.

FIGURE 4

EXISTING TRAFFIC VOLUMES PM PEAK HOUR

ROBERT N. TROUT, P.E.
TRAFFIC ENGINEERING SERVICES

ANALYSIS OF CIRCULATION ELEMENT

After completion of the Land Use Element, the development potential of the growth areas was determined. The identified growth areas are as follows:

	<u>GROWTH AREA</u>	<u>ACREAGE</u>	<u>MAXIMUM POTENTIAL HOUSING UNITS</u>
A.	North Phelps	370	550
B.	College Farms	250	500
C.	Golf Course	340	375
D.	North Jayne	380	560
E.	South Jayne	440	330
F.	Estate Residential	847	200
G.	Infill Development	<u>929</u>	<u>785</u>
	Total Buildout	3,549	3,300

For the purpose of selecting ITE Trip Generation Rates, an assumption was made that one third of the forecast housing units would not be single family units, but would be a mix of multi-family units.

With the housing units established and the assumption validated (one third multi-family is a very conservative number) the trip generation was then completed using the ITE **Trip Generation Handbook - Fifth Edition**.

TRIP GENERATION RATES

<u>LAND USE</u>	<u>DAILY RATE</u>	<u>P.M. PEAK HOUR RATE</u>
Single Family Detached Housing	9.55 Trips Per Unit Per Day	1.02 Trips Per Unit Per Hour
Multi-Family Housing	6.47 Trips Per Unit Per Day	0.63 Per Unit Per Hour

Based on the number and type of housing units listed above, the trip generation rates produce the following traffic volumes.

TRIP ASSIGNMENT

A trip assignment diagram was constructed to "chase" inbound and outbound trips, which were generated in each growth area, throughout the local City Circulation Report and the surrounding county roads and state highways. The diagram was used to determine inbound and outbound vehicular trips which will use the highway network; specifically the nine representative study intersections and critical roadway links identified by Fehr and Peers Associates, Inc.

The assignment diagram allowed P.M. peak hour turning movements to be produced. The assignment were developed manually using a combination of factors such as: Origin and destination trip distribution, directional distribution and the most probable or favored routes motorists would take to and from the seven growth areas.

The following two pages show the 2015 P.M. traffic volumes which are expected at the nine representative intersections and the 2015 daily volumes which are expected on the 23 city street segments and 12 CALTRANS links. In very general terms volumes tend to double by the year 2015. One notable exception is the eastern gateway on Route 33 in the vicinity of the new Coalinga State Prison. Traffic volumes on Route 33 crossing the narrow bridge at Warthan Creek will practically triple by the future year 2015.

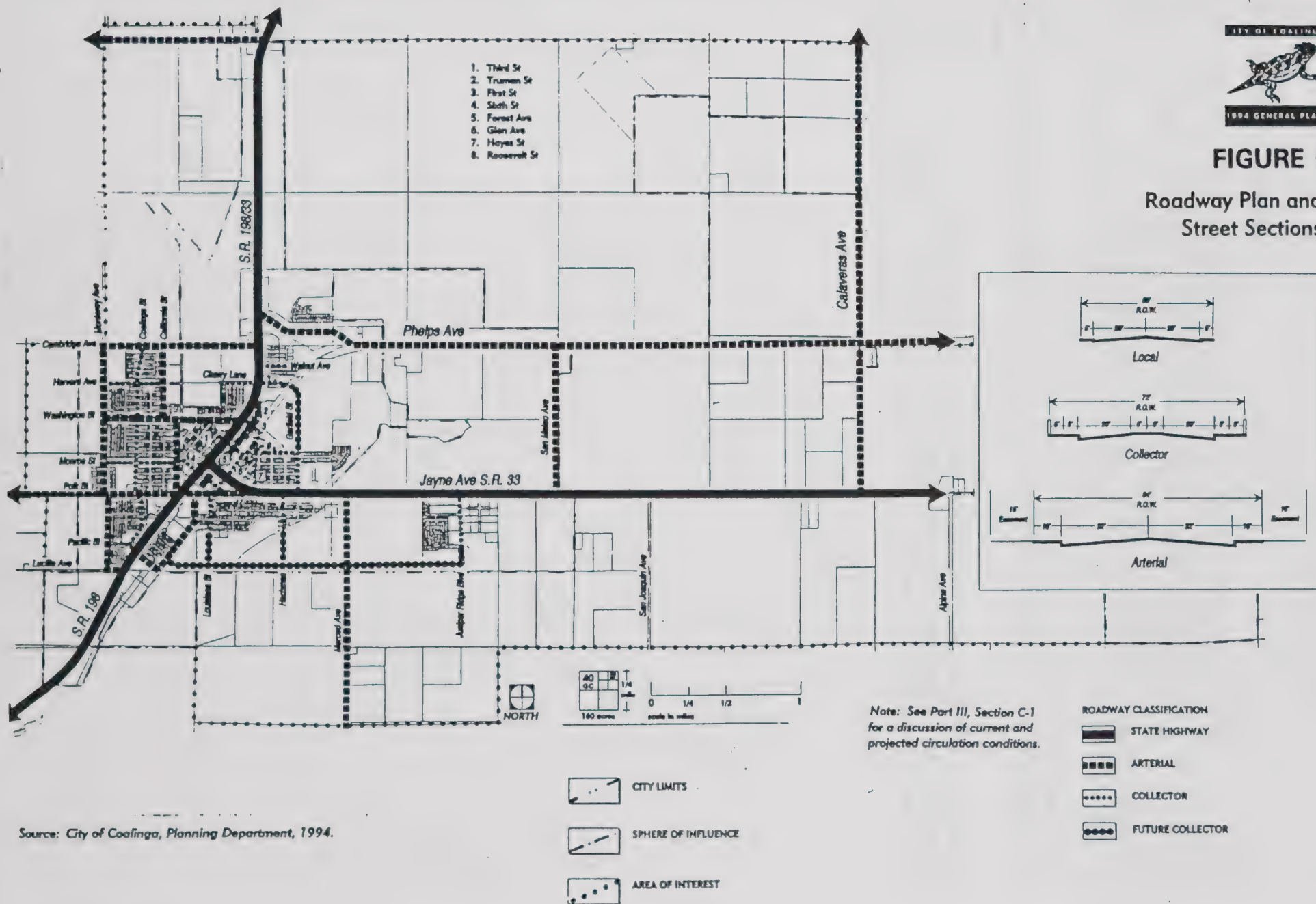
TABLE 2

YEAR 2015 FUTURE
DAILY TRAFFIC COUNTS

<u>Location</u>	<u>Future 2015 Volume</u>
Adams w/o California	600
Sunset s/o Adams	6800
Van Ness e/o Fillmore	3100
California s/o Adams	600
California s/o College	2800
California n/o Adams	700
California s/o Cambridge	1700
Cambridge 600' n/o Elm	2600
Cherry Lane e/o Elm	2400
Coalinga Plaza, 200 block	5500
Forest c/o Third	5800
Garfield n/o Polk	5400
Harvard w/o California	600
Harvard e/o College	400
Hayes n/o Polk	1800
Louisiana s/o Polk	2400
Polk e/o Glenn	8600
Sunset s/o Monroe	5500
Third e/o Birch	1800
Walnut w/o Elm	1900
Washington e/o California (EB)	3300
Washington e/o California (WB)	3300
Washington w/o Mt. View	6500
Route 33 e/o Merced	11300
Route 33 w/o Merced	21300
Route 33 e/o Fifth	16600
Route 33 n/o Polk	11900
Route 33 s/o Route 198	11700
Route 33/198 n/o Fifth	14400
Route 33/198 s/o Phelps	13600
Route 33/198 n/o Phelps	13600
Route 198 at So. City Limit	3800
Route 198 s/o Polk	7500
Route 198 n/o Polk	11700
Route 198 s/o Route 33	13500

FIGURE 6

Roadway Plan and Street Sections



Source: City of Coalinga, Planning Department, 1994.

CAPACITY ANALYSIS

The final step in the analysis involved an operational and capacity study of the nine representative study intersections and two critical roadway segments, or links, which had previously been identified in the existing conditions report as being capacity constrained in the future. The **1985 Highway Capacity Manual** for signalized and unsignalized intersections; and, the **1991 Florida Department of Transportation Urban Highway Level of Service Tables** were used to analyze the capacity of the future year 2015 scenario.

Definitions of level of service (LOS) "A" through "F" are included in the appendix. The City of Coalinga has established LOS "C" as the minimum standard to be provided in this planning document.

The two tables which follow show the level of service which exists now and which can be expected in the future year (2015). The mitigations measures which are required to maintain acceptable operating conditions in the future are thoroughly discussed in the following chapter of this report.

TABLE 4
LINK CAPACITIES

<u>Link (Bridge)</u>	Route 33 West of <u>Merced St.</u>	Route 33/198 South of <u>Phelps Ave.</u>
LOS Existing 2 Lane	B	B
LOS Year 2015 2 Lane	E	D
LOS Year 2015 4 Lane	B	B

SPECIFIC TRANSPORTATION ISSUES

In addition to major street improvement and traffic signalization projects, several other key transportation issues must be addressed during the 20 year planning period:

BIKEWAYS

The City of Coalinga wishes to address the need for adequate facilities for cyclists. Bikeways can reduce hazards, while encouraging and inducing increased usage of the bicycle and also increase the awareness among drivers to the presence of cyclists.

Two Fresno County Regional Bikeways pass through Coalinga: First, the north-south Route 198 corridor and second, the east-west Phelps Avenue-Los Gatos Creek Corridor. Additionally, the County Bikeway Plan designates bikeways along Warthan Creek, Highway 33, Los Gatos Creek and Washington/Van Ness Avenues as local bikeway routes. (See Bikeway-Pedestrian Map on following page.)

The City of Coalinga is also in the process of implementing or planning bikeways on Monterey Avenue, Pacific and Forest Streets and Cambridge Street. Also, bikeway opportunities exist along the southern pacific railroad right-of-way and a Maple Avenue easement north of Walnut Street.

Completion of approximately 20 miles of recreational and commute bikeways would; 1) Facilitate the use of the bicycle as a viable transportation alternative, 2) Improve safety for current bicycle use, 3) Encourage bicycling for reasons of energy conservation, congestion reduction, ecology, health and recreation.

TRUCK ROUTES

In order to minimize traffic disruption on city streets and lessen the effect of traffic noise along residential streets the city desires to plan for the safe and orderly flow of commercial vehicles. The plan to accomplish this goal involves: 1) Limiting designated truck routes to arterials specifically signed for that purpose, 2) Prohibiting truck traffic from non-truck routes except as necessary for direct property access, 3) Locating truck access to commercial property at the maximum practical distance from adjacent or nearby residential properties.

The map on the following page designates a system of truck routes (principally the State Highway System) which accomplishes the City's goals. Additionally, truck usage is restricted along Monterey Street within the City limits.

VALLEY GUTTERS

Many of Coalinga's residential intersections include a concrete or asphalt valley gutter to provide for the channelization of storm water run-off across the intersection. Carrying storm water drainage on the roadway surface rather than in an extensive, and costly, underground piping system makes sense in Coalinga. Where the water is carried across a roadway at an intersection a valley gutter was frequently constructed. In the past, the improvement design standard called out a narrow valley gutter, approximately two to three feet wide and several inches in depth. More recent design standards call for 6' wide or even, in some cases, 8' wide valley gutters.

The older, narrower valley gutters create a significant discomfort to the motorist. On some residential routes the motorists may encounter several significant "bumps" when he traverses a street.

The one redeeming value of the severe "bump" (valley gutter) is that it provides a certain measure of speed control in residential areas. The negatives outweigh this benefit, however, in terms of discomfort, noise, vehicle wear and tear, nuisance from standing water and safety (slipping - both pedestrian and vehicle).

For these reasons, the City proposes in this 20 Year Planning Document that narrow valley gutters be systematically removed from city streets and replaced with wider, more acceptable concrete valley gutters or in some cases with underground pipes. A system to determine the priority for the individual replacement will be developed based on traffic volumes, safety and need.

TRANSIT

The City of Coalinga, under an inter-agency agreement with the Fresno County Rural transit agency (FCRTA), provides inter-city and intra-city service using vehicles owned by the FCRTA.

The Coalinga to Fresno Inter-city Route provides one daily round trip through Huron, O'Neils, Five Points, Lanare, Riverdale, Caruthers, Raisin City and Easton. The Coalinga to Avenal Route provides two daily round trips.

Demand-responsive service within the Coalinga sphere of influence is provided to the general public Monday through Friday.

The 1994-1999 Short-range Transit Plan for the rural Fresno County area recommends among other things:

- Continue to market the intra-city transit services.
- Implement improvements as indicated by performance indicators.
- Seek additional local funding to support transit service expenses.

SUMMARY

Coalinga's transportation system is currently operating in an acceptable manner and is providing a satisfactory level of service to the community. All of the streets, highways, bridges and intersections, which were the subject of specific operational analysis, are operating at Level of Service LOS "A", "B" or "C". Many other roadway segments which were analyzed in general terms only, ie. a simple determination of existing traffic volumes, were found to be carrying existing volumes in ranges well below their design capacity. Bikeways, truck routes and transit service are all providing acceptable service. Valley gutters and multi-leg intersections, while not desirable, are not creating problems of a critical nature.

As Coalinga grows through the year 2015 traffic volumes, both external and internal, will generally double. An exception is in the southeast area near the Coalinga State Prison where traffic volumes will more than double. This significant growth will create traffic operational and capacity issues unless improvements to the transportation system are made.

If the growth occurs and no improvements are made, delay, congestion and safety concerns will occur. Many major street intersections will operate at a LOS lower than the desirable LOS "C". Several roadway segments will reach LOS "E". The two main bridges over Los Gatos Creek and Warthan Creek will no longer provide desirable levels of service. In order to mitigate these negative effects of doubling traffic volumes it will be necessary to provide traffic signals at some major intersections, improve the two state highways, widen City streets and improve the traffic carrying capacity of the two bridges. Bikeways must be implemented, truck routes formalized, transit service expanded and valley gutters and multi-way intersections reconstructed.

By implementing these improvements incrementally through the year 2015, the Circulation Report and Transportation System will adequately serve the City's growth well into the 21st century.

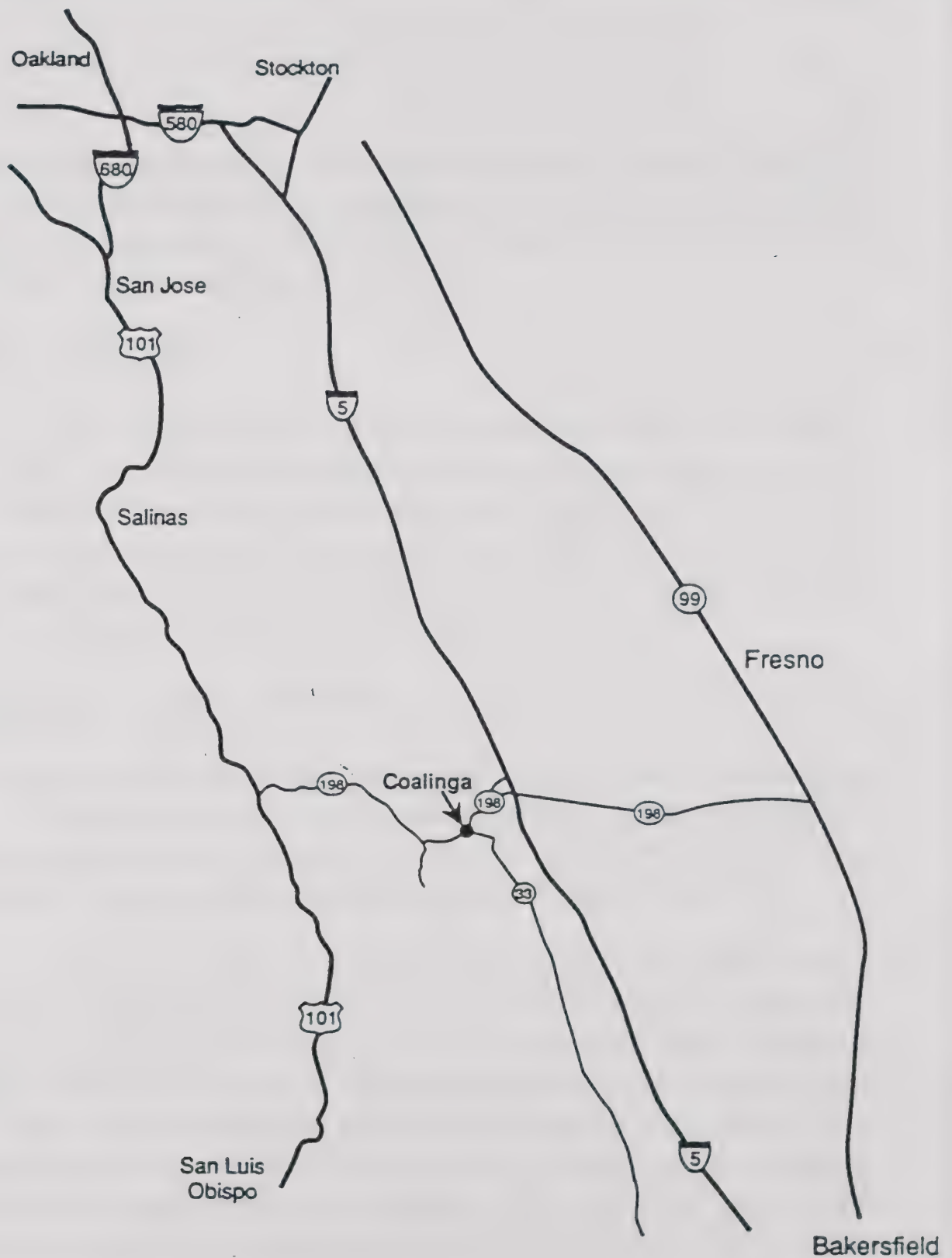
CIRCULATION REPORT
APPENDIX

Existing Conditions - 1993

1

Prepared By:

Fehr & Peers
Transportation Consultants



▲
N
Not to Scale

FIGURE 1

PROJECT LOCATION MAP

fp Fehr & Peers Associates, Inc.
Transportation Consultants

Tables 1 and 2 display the levels of service as reported in the EIR for the study intersections and highway segments, respectively. All of the intersections and highway segments analyzed in the EIR were found to operate at Level of Service A during the 1990 AM Peak Hour, Mid-day Peak Hour, and the PM Peak Hour.

D. Study Intersections

For this study, nine key intersections within the Coalinga street network have been selected for analysis. All but one of the selected intersections are located along the two major routes within Coalinga, Polk Street (State Highway 33) and Elm Street (State Highway 198). The study intersection not along either of the two major routes is located within the Coalinga downtown grid network and serves as an indicator of traffic conditions within the general commercial district. Figure 2 displays the locations of the study intersections.

E. Intersection Analysis Methodology

Traffic conditions at intersections are measured using the "Level of Service" (LOS) evaluation techniques. LOS measures how close an intersection is operating to its design capacity and is indicated by a descending scale of grades "A" through "F". LOS A indicates free flowing conditions while "F" indicates highly congested conditions with lengthy delays.

Unsignalized intersections are evaluated with the Highway Capacity Manual (HCM) Reserve Capacity method. This procedure analyzes conflicts between traffic flow along a major street and movements coming out of a side (minor) street. The major street, which typically has higher traffic volume, has no stop control. The analysis identifies the degree of "gaps" within the major street traffic flow that would allow movements from the minor street(s). This calculation derives reserve capacities for each minor street movement, that are rated against ranges of reserve capacities matched to LOS grades. LOS is reported for both the worst movement of the most constrained minor approach, and for the average of all movements on minor street approaches.

LOS for signalized intersections is calculated by measuring traffic volumes projected to pass through an intersection during a defined time period (peak hour) against that intersection's

Table 2

EXISTING 1990 HIGHWAY SEGMENT PEAK HOUR LEVELS OF SERVICE¹

<u>Highway Segment</u>	<u>AM Peak Hour</u>	<u>2:30 - 3:30 PM Hour</u>	<u>PM Peak Hour</u>
Jayne Avenue (SR 33) w/o Alpine Avenue	A	A	A
Alpine Avenue (SR 33) s/o Jayne Avenue	A	A	A
Highway 33 s/o Lost Hills Road	A	A	A
Jayne Avenue e/o Alpine Avenue	A	A	A
Jayne Avenue e/o Sutter Avenue	A	A	A
Jayne Avenue w/o Lassen Avenue	A	A	A

1 Source: California State Prison - Fresno County at Coalinga Environmental Impact Report, March 1990.

designed traffic flow capacity. This results in a vehicle/capacity (v/c) ratio which is translated into an LOS letter grade ranging from 0.60 (LOS A) to 1.00+ (LOS F). Table 3 provides a comparison of LOS grades, v/c ratios, reserve capacities and qualitative descriptions associated with each measure.

The Coalinga City Policy specifies that LOS C is the acceptable threshold for transportation facilities.

F. Existing PM Peak Hour Traffic Conditions

Fehr & Peers Associates obtained new PM peak hour turn movement count data at all of the study intersections. The intersection turn movement counts were performed from 3:00 PM to 6:00 PM on Thursday, October 7, 1993. This survey period started earlier than normal to reflect the unique attributes of the oil industry around Coalinga. Figure 3 shows the existing lane configurations at each study intersection and Figure 4 displays the results of the traffic counts in terms of the PM peak hour volumes.

The existing PM peak hour LOS for the study intersections are reported in Table 4. All of the study intersections currently operate at average or above average LOS in the PM peak hour. The intersections at Cherry/Elm and Van Ness-First/Elm both have left turn movements from the minor street approaches which operate in the LOS C range. All other study intersections experience uncongested operation in the LOS A to B range. Overall, the study intersections do not have any major obstructions or capacity constraints which affect their ability to serve the observed traffic volumes. The existing LOS at the study intersections indicates that traffic circulation in and around the city operates predominantly under free flow conditions.

G. Analysis of Potential Constraints

This section reviews potential constraints to growth in Coalinga. It should be noted that virtually all existing constraints can be eliminated through some level of improvement, either signalization, widened roadways, or new roadways. Therefore they are constraints only in terms of requiring future mitigations.

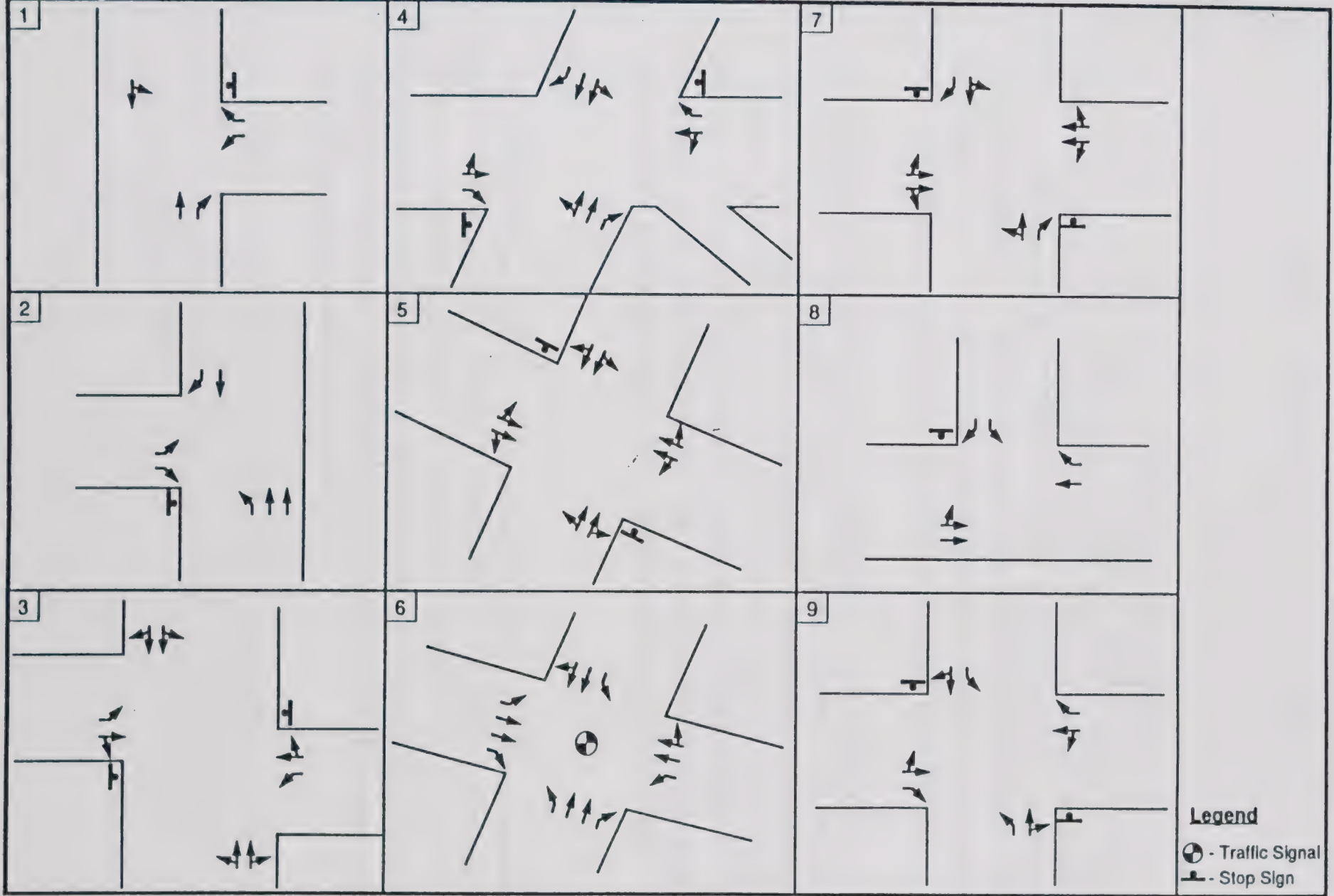


FIGURE 3

EXISTING LANE CONFIGURATION

Intersections

The intersections at Cherry/Elm and Van Ness-First/Elm currently operate at LOS C. While still well within the range of acceptability (the Coalinga City Policy defines LOS C as the minimum acceptable LOS), these intersections represent the most critical capacity constraints of the study intersections. Both of these intersections are unsignalized with stop sign controls on the minor streets only. As these intersections operate at the lowest LOS of the nine study intersections, they are likely to require the earliest capacity improvements in order to accommodate additional traffic resulting from growth in and around Coalinga.

To accommodate a major increase in volumes, signalization would most likely be the first step of any mitigation measure at these locations. However, a review of the existing traffic volumes at these locations indicates that signalization would not be warranted at either location until traffic volumes increased by approximately 200 to 300 vehicles at each intersection in the PM peak hour. All other study intersections currently operate at significantly better LOS than Cherry/Elm and Van Ness-First/Elm and could accommodate even higher amounts of additional traffic before improvements such as signalization would become necessary.

Bridges

Two existing two-lane bridges on major approaches to Coalinga represent constraints to growth unless improvements are made. The first bridge, on S.R. 198/33 near Phelps Ave. on the north side of town, currently has a peak hour volume of approximately 445 vph. According to the Highway Capacity Manual (HCM), the threshold for a two-lane rural highway operating at LOS C or better is 650 vph. This means that there is currently a reserve of about 205 peak hour vehicles at this facility.

The second bridge is located on Polk St. (S.R. 33) at Warthan Creek. Currently, peak hour volumes are about 553 vph compared to the threshold of 650 vph to maintain LOS C. Therefore, the reserve capacity here is less than 100 vph which might be exceeded by future traffic from the new state prison.

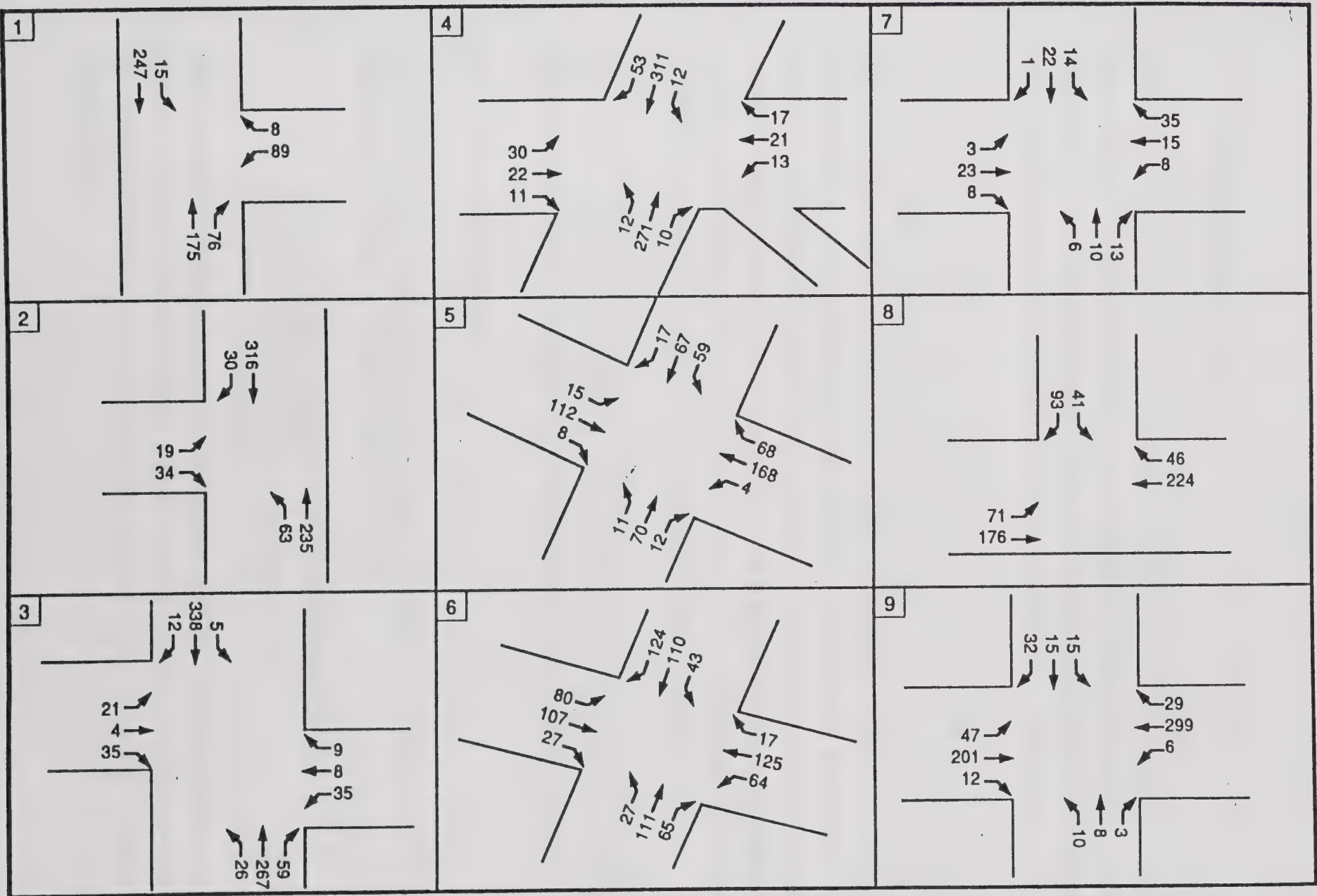


FIGURE 4

EXISTING TRAFFIC VOLUMES
PM PEAK HOUR

II. Origin-Destination Survey

An origin-destination survey was conducted in Coalinga to identify overall circulation patterns and distinguish between local and through traffic. The survey was accomplished by stationing counters at all four main access points into/out of Coalinga who collected license plate numbers of vehicles. This data was then fed into a computer-program which identified plate numbers that re-appeared at one of the four stations by fifteen-minute increment of time period.

One of the key assumptions was that any vehicle entering Coalinga that did not exit again by expiration of the following 15-minute segment (minimum possible time: 16 minutes, maximum possible time: 30 minutes) was considered a local trip. This is based on the concept that it does not take more than 15 minutes for a through vehicle to traverse Coalinga. Some vehicles entered Coalinga and then exited within fifteen minutes using the same access road. These trips were not considered "through" trips in the true sense because it is obvious that they must have had a local destination. It is important to note that a significant number of vehicles were identified as making return trips using the same gateway within 30 minutes, indicating that Coalinga is a major service center for a lot of people who live/work outside the city.

Local trips are defined as any vehicle that did not exit the City within at least 30 minutes. Some of these might be "through" trips that stopped for food or supplies and continued on. However, these vehicles are considered "local" because they did have a local destination.

A. Survey Methodology

Survey teams were stationed during the afternoon peak period (3:00 PM to 6:00 PM) at the following four locations on Thursday October 7, 1993:

- Elm Street (Highway 198/33) at the Los Gatos Creek Crossing
- Polk Street west of Warthan
- Elm Street (Highway 198/33) south of Pacific
- Polk Street east of Monterey

These locations were selected because they represented "gateway" points for vehicles that were leaving or entering the City of Coalinga urbanized area, and because prevailing speeds were low enough for the surveyors to read license plate numbers. Figure 5 displays the license plate survey locations.

For both directions of travel at each location, survey staff recorded the license plate numbers of each passing car and the time of observation. Database files were created for data reduction (approximately 4,150 total records) and cross tabulating programs were designed to search for license plate matches at each location. Conclusions about the travel patterns in the area (specifically related to origin and destination characteristics) were then produced based on this cross referencing methodology.

B. Summary of Results

An analysis of the survey results has yielded the following conclusions about the existing travel patterns of Coalinga area traffic during the afternoon peak period:

- The total inbound volume counted was 2,178 vehicles. The total outbound volume counted was 1,974 vehicles.
- The vast majority of the 2,178 inbound vehicles counted (74%) had a primary or secondary destination in Coalinga, with the remaining 26% being through trips.
- The north S.R. 198 entrance and east S.R. 33 entrance accounted for over 83% of all inbound trips.
- The heaviest inbound traffic through movements were southbound on S.R. 198 into Coalinga and then east on S.R. 33 (199 vehicles, or 9% of the total volume) and the reverse movement coming from S.R. 33 west into Coalinga and then north on S.R. 198 (100 vehicles, 5% of the total volume). This circulation pattern accounted for 60% of all inbound through traffic.
- A substantial portion of inbound local traffic (30%) were vehicles that exited the same gateway within 30 minutes of entering.
- Outbound trips revealed very similar characteristics, due to the fact that most of the through vehicles were counted as inbound vehicles at another gateway and inbound local trips are most likely similar to outbound local trips. Combining inbound and outbound findings would be misleading in that it would overstate through trips.

The percentage breakdowns of all approach and departure volumes at each survey location are displayed in Figures 6-9.

The findings of the O-D survey will be used in developing a traffic model to test various future land use scenarios for Coalinga. The survey itself provides a snapshot into the travel

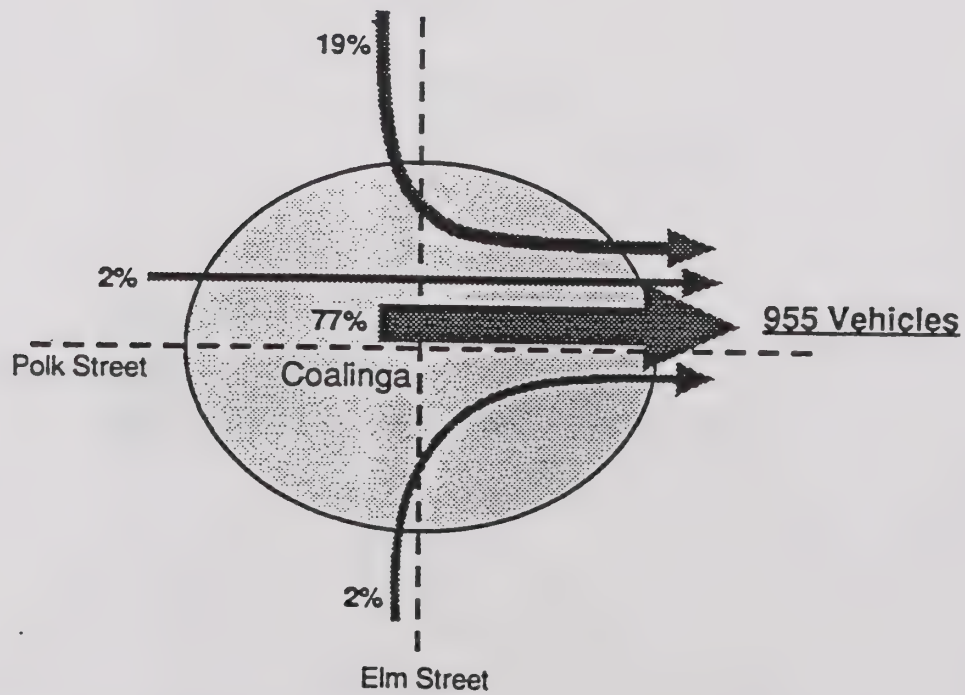
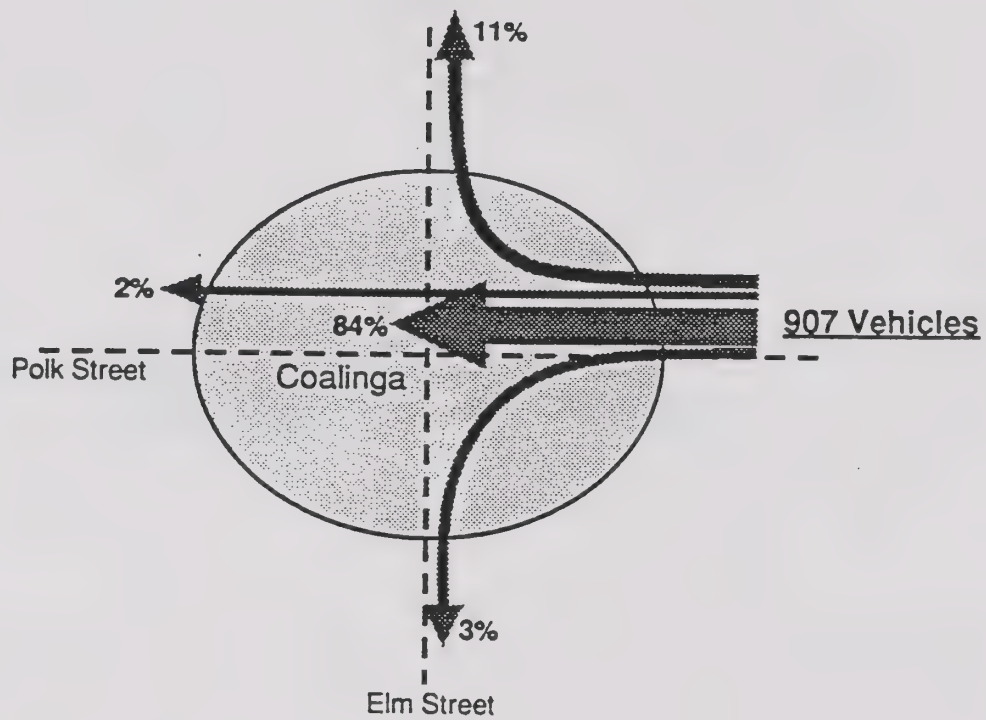


FIGURE 7

**PERCENTAGE BREAKDOWN OF EAST
APPROACH / DEPARTURE VOLUMES
PM PEAK HOUR**

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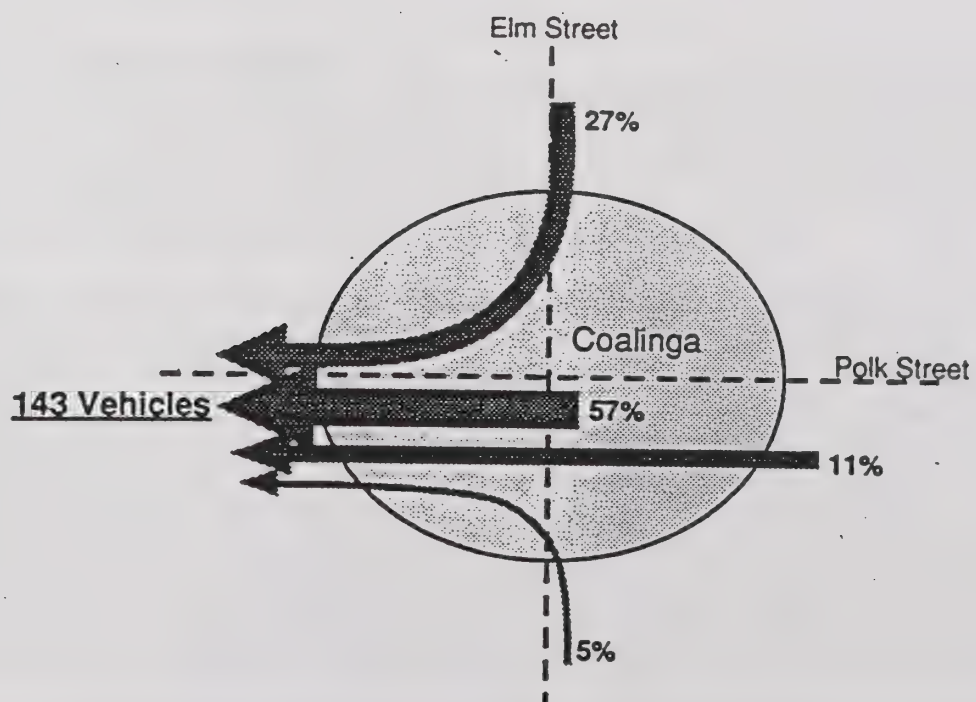
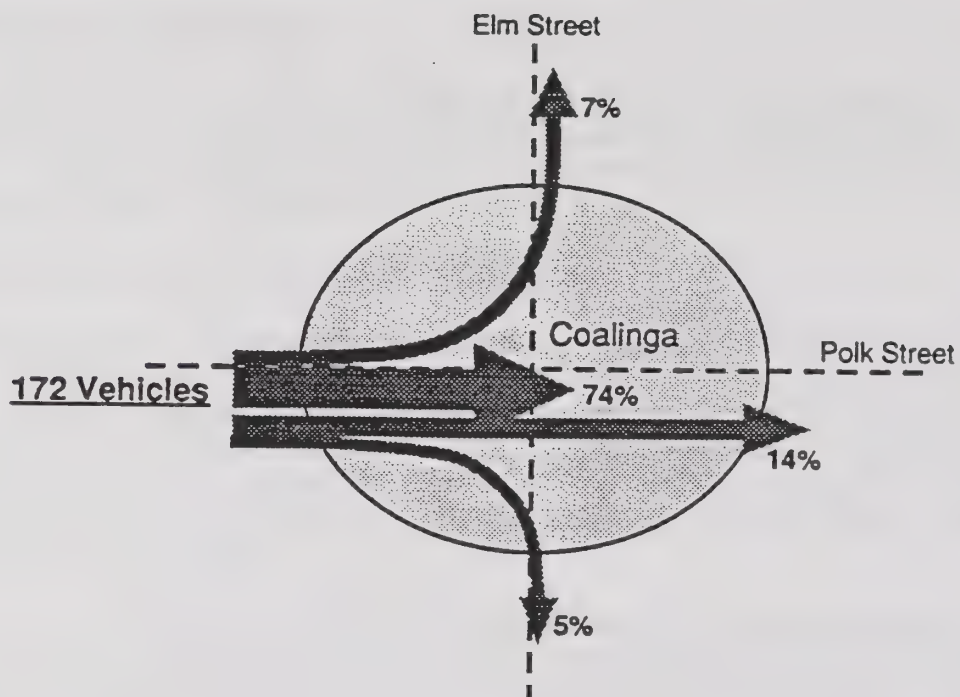


FIGURE 9

**PERCENTAGE BREAKDOWN OF WEST
APPROACH / DEPARTURE VOLUMES
PM PEAK HOUR**

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APPENDIX C – Noise Evaluation

Coalinga Noise Monitoring

In order to identify existing noise levels in the City and to identify potential noise problems, noise was monitored at selected locations in Coalinga on November 19, 1993. Noise was measured at sensitive sites (medical center, schools) and at other locations to provide comparison and context.

Noise Monitoring Equipment and Procedures

Noise Monitoring Equipment. Noise measurements were made using a Bruel & Kjaer (B&K) Type 2230 Precision Integrating Sound Level Meter with B&K Type 4155 1/2 inch prepolarized condenser microphone. The sound level measured by the meter was recorded graphically on a chart using a B&K Type 2317 Graphic Level Recorder. The system was calibrated end-to-end using a B&K Type 4230 Sound Level Calibrator prior to starting monitoring. All equipment appeared to be in proper working order.

The sound level meter used for the measurements is an integrating sound level meter, which accumulates energy-averaged noise levels (L_{eq}) over the monitoring period, and also has a memory which retains the lowest and highest noise levels measured during the monitoring period. The energy-averaged noise level is the equivalent constant noise level that would result if all the sound energy received over the monitoring period were averaged over that period. Human response to varying community noise environments has been found to correlate well with the energy-averaged noise level.

Noise Monitoring Procedure

At each site, the microphone was placed at a distance of 50 back from the edge of the sidewalk farthest from the street, or in the case of Site 1, 50 feet back from the fence along the side of Phelps Avenue. At the school where there was no sidewalk, the meter was placed 50 feet back from the curb. This common placement provided similar response to traffic noise peaks at each monitor site.

At each noise monitor site, equipment was set up in accordance with the manufacturer's instructions for random incidence noise measurements. The microphone was located approximately 1.5 meters above the surrounding terrain and directed 70 to 80 degrees from the horizontal in the direction of the noise source. Before each monitoring session, the sound level meter was calibrated using the acoustic calibrator. The chart recorder was adjusted to the calibration noise level to provide an end-to-end calibration of the system. Following calibration, the output range of the sound level meter was reduced by 10 or 20 decibels depending on the location to 40-90 or 30-80 decibels to permit chart recording of both the lowest and highest sound levels likely to be measured at that site. The "A" weighting scale was used to best reflect the frequency response of the human ear to loudness of sounds.

The sound level meter and chart recorder were set for "slow" response in accordance with standard procedures for measuring community noise.

Monitor Site 5. Olsen Park, Garfield Street at Hoover Street. 12:30-12:40 p.m.
 This site was selected to be representative of noise levels in residential areas near collector streets. The monitoring equipment was set up in the park 50 feet back from Garfield Street and in line with the north side of Hoover Street.

This site is exposed to traffic because of the large area served by Garfield Street. 16 cars, pickups or vans passed the site during the monitoring period. L_{eq} for the monitoring period was 51.7 dB. Maximum noise level measured was 66.0 dB(A) and minimum noise level was 34.5 dB(A).

Table 1
Noise Measurement Summary

Monitor Site	Measured Noise Level		L_{eq}	Cars, vans, pickups	Buses, trucks
	Minimum (dBA)	Maximum (dBA)			
1. Frame Park	39.2	61.8	51.6	15	
2. Hospital	32.4	78.9	59.6	16	6
3. Schools	32.0	62.2	45.0	4	
4. Polk at Elm	53.5	75.3	63.7	50+	7
5. Garfield at Hoover	34.5	66.0	51.7	15	

Relation to Noise Standards and Guidelines

According to research summarized in *Report on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety*, EPA, 1974, the threshold of significant noise impact begins at about 55 decibels on the day-night noise level scale, or L_{dn} . L_{dn} is the energy-equivalent noise level for a 24-hour period, with noise between 10:00 p.m. of one day and 7:00 a.m. of the following day penalized by 10 dB to account for the increased sensitivity of people to noise at night. L_{dn} is similar to the Community Noise Equivalent Level (CNEL) used in California standards, which adds a 5 dB penalty to the period from 7:00 p.m. to 10:00 p.m. to the L_{dn} noise level.

State standards call for special studies to determine sound insulation requirements for multi-family dwellings where noise exceeds 60 dB CNEL. Above 65 dB CNEL, the environment is generally considered unsuitable for residential development, and special sound insulation is required. Based on the limited noise monitoring results, it is possible that residences which are near the right-of-way fronting on Phelps Avenue, Polk Street and Elm Avenue are exposed to noise exceeding 60 dB CNEL. New residential development on these arterials should be required to provide sound

APPENDIX D

GLOSSARY

August, 1994

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804.00

GLOSSARY

Access - A way of approaching or entering a property, including ingress (the right to enter) and egress (the right to leave).

Air Basin - One of 14 self-contained regions minimally influenced by air quality in contiguous regions.

Air Pollutant Emissions - Discharges into the atmosphere, usually specified in terms of weight per unit of time for a given pollutant from a given source.

Air Pollution - The presence of contaminants in the air in concentrations that prevent the normal dispersive ability of the air and that interfere directly or indirectly with man's health, safety or comfort, or with the full use and enjoyment of property.

Air Quality Standards - The prescribed level of pollutants in the outside air that cannot be exceeded legally during a specified time in a specified geographical area.

Ambient Noise Level - The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Annexation - The incorporation of a land area into an existing community with a resulting change in the boundaries of that community.

Application For Development - The application form(s) and all accompanying documents and exhibits required of an applicant by an approving authority for development review by governmental agency(s).

Aquifer - An underground bed or stratum of earth, gravel or porous stone that contains water.

Archaeological Site - Land or water areas which show evidence or artifacts of human, plant or animal activity, usually dating from periods of which only vestiges remain.

Arterial - A major street carrying the traffic of local and collector streets to and from freeways and other major streets, with controlled intersections and generally providing direct access to nonresidential properties.

A-Weighted Decibel (dBA) - A numerical method of rating human judgement of loudness. The sound pressure level in decibels, as measured on a sound meter, uses an A-weighting filter to de-emphasize the very low and

Condominium - A building, or group of buildings, in which units are owned individually, and the structure, common areas and facilities are owned by all the owners on a proportional, undivided basis.

Conservation - The management of natural resources to prevent waste, destruction or neglect.

Council of Governments (COG) - A regional planning and review authority whose membership includes representation from all communities in the designated region. The Southern California Association of Governments (SCAG), the San Diego Association of Governments (SANDAG) and the San Bernardino Association of Governments (SANBAG) are examples of COGs in Southern California.

Coverage - The proportion of the area of the footprint of a building to the area of the lot on which it stands.

Day-Night Average Level (Ldn) - The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels in the night after 10 p.m. and before 7 a.m.

Decibel (dB) - A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

Density - The number of families, individuals, dwelling units or housing structures per unit of land; usually density is expressed "per acre." Thus, the density of a development of 100 units occupying 20 acres is 5.0 units per acre.

Development - The division of a parcel of land into two or more parcels; the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any structure; any mining, excavation, landfill or land disturbance, and any use or extension of the use of land.

Development Impact Fees - A fee or charge imposed on developers to pay for the costs to the community of providing services to a new development.

Development Plan - A plan, to scale, showing uses and structures proposed for a parcel or multiple parcels of land. It includes lot lines, streets, building sites, public open space, buildings, major landscape features and locations of proposed utility services.

Dwelling - A structure or portion of a structure used exclusively for human habitation.

utility facilities such as water supply, sewage disposal, gas storage facilities and transmission lines, and electric generation stations and transmission lines.

Fault - A fracture in the earth's crust forming a boundary between rock masses that have shifted.

Fault, Active - A fault that has moved recently and which is likely to move again. For planning purposes, an "active fault" is usually defined as one that shows movement within the last 11,000 years and can be expected to move within the next 100 years.

Fault, Inactive - A fault which shows no evidence of movement in recent geologic time and no potential for movement in the relatively near future.

Fault, Potentially Active - A fault that last moved within the Quaternary Period (the last 2,000,000 to 11,000 years) before the Holocene Epoch (11,000 years to the present); or a fault which, because it is judged to be capable of ground rupture or shaking, poses an unacceptable risk for a proposed structure.

Fire Flow - A rate of water flow that should be maintained to halt and reverse the spread of a fire.

Flood Plain - A lowland or relatively flat area adjoining inland or coastal waters that is subject to a one percent or greater chance of flooding in any given year (i.e., 100-year flood).

Floodway - The channel of a natural stream or river and portions of the flood plain adjoining the channel, which are reasonably required to carry and discharge the floodwater or flood flow of any natural stream or river.

Floor Area Ratio (FAR) - The gross floor area of all buildings on a lot divided by the lot area; usually expressed as a numerical value (e.g., a building having 5,000 square feet of gross floor area located on a lot of 10,000 square feet in area has a floor area ratio of .5:1).

General Plan - A legal document which takes the form of a map and accompanying text adopted by the local legislative body. The plan is a compendium of policies regarding the long-term development of a jurisdiction. The state requires the preparation of seven elements or divisions as part of the plan: land use, housing, circulation, conservation, open space, noise, and safety. Additional elements pertaining to the unique needs of an agency are permitted.

Goal - The ultimate purpose of an effort stated in a way that is general in nature and immeasurable; a broad statement of intended direction and purpose (e.g., "Provide a balance of land use types within the city").

Implementation Measure - An action, procedure, program, or technique that carries out general plan policy.

Income Categories - Four categories for classifying households according to income based on the median income for each County. The categories are as follows: Very Low (0-50% of County median); Low (50-80% of County median); Moderate (80-120% of County median); and Upper (over 120% of County median).

Infrastructure - The physical systems and services which support development and population, such as roadways, railroads, water, sewer, natural gas, electrical generation and transmission, telephone, cable television, storm drainage, and others.

Intensity - A measure of the amount or level of development often expressed as the ratio of building floor area to lot area (floor area ratio) for commercial, business, and industrial development, or units per acre of land for residential development (also called "density").

Issue - A problem, constraint, or opportunity requiring community action.

Intersection - Where two or more roads cross at grade.

Land Use - A description of how land use is occupied or used.

Land Use Plan - A plan showing the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational and other public and private purposes or combination of purposes.

Landslide - A general term for a falling or sliding mass of soil or rocks.

Liquefaction - A process by which water-saturated granular soils transform from a solid to a liquid state due to groundshaking. This phenomenon usually results from shaking from energy waves released in an earthquake.

Local Street - A street providing direct access to properties and designed to discourage through-traffic.

Lot - The basic unit of land development. A designated parcel or area of land established by plat, subdivision, or as otherwise permitted by law, to be used, developed or built upon as a unit.

Median Income - The annual income for each household size which is defined annually by the Federal Department of Housing and Urban Development. Half of the households in the region have incomes above the median and half are below.

redevelopment is a process in which existing development and use of land is replaced with newer development and/or use.

Rehabilitation - The upgrading of a building previously in a dilapidated or substandard condition, for human habitation or use.

Right-of-Way - A strip of land acquired by reservation, dedication, prescription or condemnation and intended to be occupied or occupied by a road, crosswalk, railroad, electric transmission lines, oil or gas pipeline, water line, sanitary or storm sewer, or other similar uses.

Sensitive Species - Includes those plant and animal species considered threatened or endangered by the U.S. Fish and Wildlife Service and/or the California Department of Fish and Game according to Section 3 of the Federal Endangered Species Act. Endangered - any species in danger of extinction throughout all, or a significant portion of, its range. Threatened - a species likely to become an endangered species within the foreseeable future throughout all, or a portion of, its range. These species are periodically listed in the Federal Register and are, therefore, referred to as "federally listed" species.

Sewer - Any pipe or conduit used to collect and carry away sewage from the generating source to a treatment plant.

Site Plan - The development plan for one or more lots on which is shown the existing and proposed conditions of the lot including: topography, vegetation, drainage, floodplains, marshes and waterways; open spaces, walkways, means of ingress and egress, utility services, landscaping, structures and signs, lighting, and screening devices; any other information that reasonably may be required in order that an informed decision can be made by the approving authority.

Solar Access - A property owner's right to have the sunlight shine on his/her land.

Solid Waste - Unwanted or discarded material, including garbage with insufficient liquid content to be free flowing, generally disposed of in land fills or incinerated.

Special District - A district created by act, petition or vote of the residents for a specific purpose with the power to levy taxes.

Special Needs Groups - Those segments of the population which have a more difficult time finding decent affordable housing due to special circumstances. Under State planning law, these special needs groups consist of the elderly, handicapped, large families, female-headed households, farmworkers and the homeless.

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